SOUVENIR

PROJECT EXPO - 2019

29th March 2019

In Association with
IEEE Student Chapter

MVSR ENGINEERING COLLEGE

Nadergul, Saroornagar Mandal, Ranga Reddy

Hyderabad, Telangana 501510

MVSR Engineering College

(Sponsored by Matrusri Education Society, Estd. 1980)

Affiliated to Osmania university and Recognized by AICTE

Nadergul P.O., Hyderabad

OUR VISION

To Impart technical education of the highest standards, producing technically competent confident and socially responsible engineers

OUR MISSION

- To impart adequate fundamental knowledge, technical and soft skills to students.
- To make learning process exciting, stimulating and joyful.
- To create a climate conducive to excellent teaching – learning Process.
- To bring out creativity in students.
- To contribute to advancement of engineering & technology.
- To make positive contribution to meet societal needs.

COLLEGE PROFILE

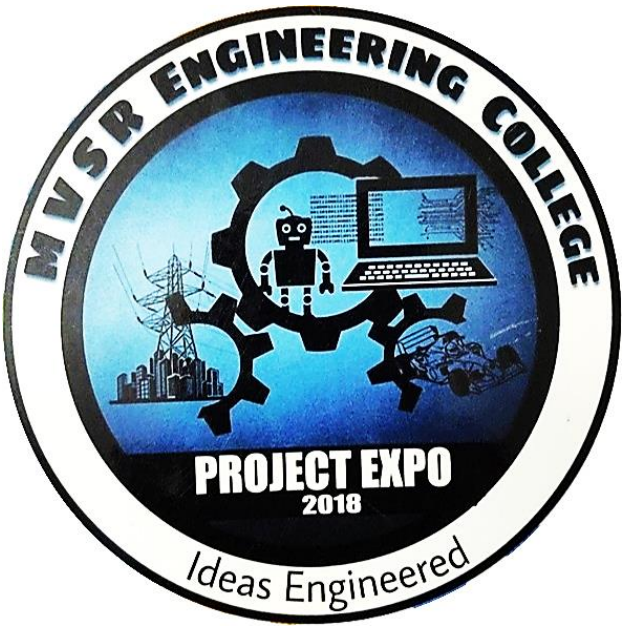
MVSR Engineering College, i.e., Maturi Venkata Subba Rao Engineering College, was founded in 1981 with three disciplines. Over the years it has grown from strength to strength and stands as a premier technical institute in the state of Telangana. The total student strength at present is over 4500. There are 200 well qualified faculty and 180 skilled supporting staff.

The college now offers B.E. 4-year degree courses in 7 disciplines with an annual average intake of 870. The college offers post graduate courses of ME-CAD/CAM, CSE, Embedded System and VLSI Design besides MBA. All of the courses are affiliated to Osmania University and approved by AICTE.

The BE programs of Civil, Computer Science, Information Technology, ECE, EEE And Mechanical Engineering have been accredited by the NBA of AICTE thrice. The college also has additional intake of Diploma holders who join into II year under 20% supernumerary quota as Lateral Entry through Convener, ECET.

PROJECT EXPO *aims to showcase a set of good project works from various Engineering Disciplines at one place to*

- *Enable students appreciate the project works from other engineering disciplines.*
- *Expose students to the aspects of work ethics, project management and practical utility of their works.*
- *Enable experts from Industry, Research, Academics, Government and Professional Bodies assess and suggest directions to improve the work from the perspective of their expertise.*
- *Inculcate understanding and coordination among students and faculty for development of interdisciplinary applications of social significance. Explore and offer interdisciplinary projects.*
- *Encourage students to pursue further development of the project works into prototypes that are novel and technically viable for a possible startup.*
- *Identify research areas that needs to be addressed to realize certain aspects involved in the Projects for a prospective research engagement.*



Chairman's Message

I am happy that MVSR Engineering College is organizing a Project Expo 2019 on 29th March, 2019 at the college.

I understand that some of the students' projects of the recent years will be showcased by all the departments of the college. Such a formal exhibition of projects will surely motivate the current students to take up projects involving the latest trends in technology and of societal importance. It will also be an occasion to highlight the contribution of faculty and staff in the evolution of student's project works.

I congratulate the organizer of the event for the initiative and I wish the Project Expo-2019 a grand success.

Dr. K.P. Srinivas Rao,
Chairman, MES

CHAIRMAN
for MATRUSRI EDUCATION SOCIETY

M.V.S.R. Engineering College

(Sponsored by **Matrusri Education Society** & Affiliated to **Osmania University**) Estd. 1981
Door No. G.P. 10-101, Nadergul (P.O.). Hyderabad - 501 510. Saroornagar Mdl. R.R. Dt. T.S.
Telefax : 08415-245180, **www.mvsrec.edu.in**

Principal's Message

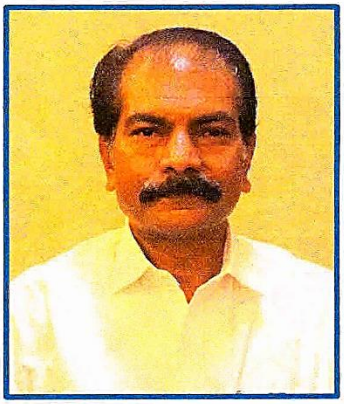
It is very heartening to know that MVSREC is organizing Project Expo-2019, show casing the last few years projects accomplished across all the disciplines. This Expo will be highly beneficial to the current under graduate & post graduate students, in understanding the latest technologies and areas of domain to be tackled to meet the societal needs.

I wish Project Expo-2019 a grand success.

Dr. G. Kanaka Durga

Principal

Principal
M.V.S.R. Engineering College
Nadergul, Hyderabad-501 510



Coordinators Message

It gives us immense pleasure to share that MVSR Engineering College is organizing Project Expo-2019, a students' project exhibition of all disciplines on 29th March, 2019.

The event aims to show Academicians, Scientists, Industrialists, representatives from professional bodies and officials from government to elicit valuable suggestions to improve the works and provide direction from their perspective. We hope that their effort will take a step forward to "Make in India". The Project Expo-2019 provides an opportunity to share knowledge and innovative ideas in the technologies and motivate in-house research and development of new products and software's in future.

We wish the Project Expo-2019 a grand success.

Mr. V. Ashwini Kumar
Chief Coordinator
EDC Cell

Dr. M. Madhavi
Chief Coordinator
RDC Cell

HEADS OF THE DEPARTMENTS

S.NO	NAME	DEPARTMENT
1	**DR. G. VENKATA SUBBAIAH,** Ph.D	AUTOMOBILE ENGINEERING
2	**Prof. S.G.S. MURTHY**	CIVIL ENGINEERING
3	**DR. AKHIL KHARE,** Ph.D	COMPUTER SCIENCE & ENGINEERING
4	**DR. B. SARALA,** Ph.D	ELECTRONICS & COMMUNICATION ENGG
5	**DR. D. VENU MADHAVA CHARY,** Ph.D	ELECTRICAL & ELECTRONICS ENGG
6	**DR. CH. SAMSON,** Ph.D	INFORMATION TECHNOLOGY
7	**DR. J. KANDASAMY,** Ph.D	MECHANICAL ENGINEERING
8	**DR. A.R. SUBRAHMANYAM,** Ph.D	APPLIED SCIENCES & HUMANITIES
9	**DR. M. SREE RAMA DEVI,** Ph.D	MBA

FACULTY CO-ORDINATORS

Project Expo 2019 coordinator: T. MURALI MOHAN

S.NO	NAME	DEPARTMENT
1	**M. PANDARINATH,** ASST. PROF **MALIKSAB BAGAWAN,** ASST. PROF	AUTOMOBILE ENGINEERING
2	**DR. SANDHYA RANI,** ASST. PROF	CIVIL ENGINEERING
3	**DR. B. SANDHYA,** ASSO. PROF **B. VENKATARAMANA,** ASST. PROF **D. SIRISHA,** ASST. PROF	COMPUTER SCIENCE & ENGINEERING
4	**P. SRINIVAS,** ASST. PROF	ELECTRONICS & COMMUNICATION ENGINEERING
5	**DR. T. CHANDRA SEKHAR,** ASSO. PROF **DR. D. HARI KRISHANA,** ASSO. PROF	ELECTRICAL & ELECTRONICS ENGINEERING
6	**K.SRILAXMI,** ASST. PROF	INFORMATION TECHNOLOGY
7	**N. YOGI MANASH REDDY,** ASST. PROF **A.SYAMPRASAD,** ASST. PROF	MECHANICAL ENGINEERING
8	**DR.N. SRAVANTHI,** Asso.Prof	MBA

Student Organising Team

Automobile Engineering

1. Sukumar Chowdary	2. Harshit Varma Dandu
3. Mir Farhan Mohiuddin	4. Vineeth
5. Shivam singh	6. Sonylal Nayak
7. Chaitanya dev	

Civil Engineering

1. B.Arunkumar	2. K.Jyothsnaa Reddy
3. Nikhitha Soma	4. Sambu Sai Charan
5. G Bhuvana	6. Rahulsai Regulla
7. Adepu Sai Teja	8. Gade Sharan Megha reddy
9. Sambu Sai Charan	

Computer Science and Engineering

1. Tallapelli Bharath	2. J.Yamini
3. Kodimala Manikanta	4. Ramaraju Naga Pawan Keerthan
5. Muthavarapu Navya Sahithi	6. Jatoth Sanjeevani
7. Ch Jinesh	8. Aditya Manikanth Rao Regalla

Electrical and Electronics Engineering

1. Sputhnic Palle	2. Shivani Kasarla
3. K. Sai Ganesh	4. P.Rahul
5. B.Praveen	6. M. Divya
7. Suresh Rathod Nenavath	8. Basa Nikhil
9. J.Chinna	10. P.Rahul
11. M Tejaswi	

Electronics and Communication Engineering

1. Alampalli Nikhil Chandra Gupta	2. Sunkara Monika
3. Chintalapally Prithvi Raj	4. Nagasekhar reddy
5. Karra Anil Kumar	6. Kalwa Chandana
7. Nagasekhar reddy	8. K Jaideep

Information Technology

1. Maddu Shresta Reddy	2. R.Ramya Sri
3. Gunda Pranay	4. Siddarth Kollipara
5. Saikiran	6. G Vamshi Krishna

Master of Business Administration

1. D Vivek	2. Kolla laahiri choudary
3. K.Jyothi	4. Katle Preethi
5. M. Tejaswi	6. R.Avanthi
7. Challapudi bhagyasree	8. K. Govind Venkata Krishna
9. Peravali Madhavi	10. srikanth reddy
11. P. Avinash	12. Hari Prasad
13. Palle Srilekha	14. M shiva kumar
15. R.Krishna vamshi	16. S.Sonam goud

Mechanical Engineering

1. Chikatimarla Sai Kiran	2. Sharat
3. Bhanu Prakash Reddy	4. A.Mounika
5. Mokshagna Reddy	6. Sangram reddy
7. Bogum Nikhil siddarth	

MVSR ENGINEERING COLLEGE

(Sponsored by Matrusri Education Society,Estd.1980)

Nadergul (P.O) , Hyderabad - 5 0 1 5 1 0

IEEE MVSR

Invitation

Research & Development and Consultancy Cell
Cordially invites You to the
Inaugural session

PROJECT EXPO - 2019

Presided by

Dr.K.P.Srinivas rao
Chairman,MES

Chief Guest
Dr.J.V.R.Sagar
Director,ANURAG,DRDO

Date and Time:
29th March 2019,10:00am

Venue:
CSE Seminar Hall

Dr.G.Kanaka durga
Principal

V.Ashwini Kumar
Chief Coordinator
EDC

Dr.M.Madhavi
chief Coordinator
RDC Cell

Inaugural Function

Date & Time : 29th, March ,2019- 10.30.to 11.30am
Venue: CSE Seminar Hall,CSE Block

Expert Team

S.No.	Name of the Expert	Professional details	Department
1.	Dr.J.V.R.Sagar	Director,ANURAG,DRDO	Chief Guest for Inaugural function
2.	Dr.P.Ravi Kumar	Member Secretary, TSCOST	Chief Guest for Valedictory Function
3.	Prof.J.Gopala Rao	Professor, TechMahindra, Hyderabad.	CSE
4.	Mr.S.Venkateswara Rao	AMD, Hyderabad	IT
5.			
6.			
7.	Mr.T.Naveen Kumar	Executive Engineer, Hydel Designs,GENCO	Civil
8.	Shri.P.Chandra Sekhar	Industrialist	ECE
9.	Dr.P.V.Bala Subramanyam	Professor,CMRCET,Hyderabad.	EEE
10.	Dr.Jagadeshankrishna Murthy	Rtd., Director, RCI,DRDO	Mech
11.	Shri. B.N.Murthy	Industrialist	Auto
12.	Mr.Devender Reddy	Entrepreneur , Erick Manufacturers of Electric Rickshaws & Loaders.	MBA

Dr. Jagadisan Krishnamoorthy

Dr.Jagadisan krishnamoorthy alumini of NIT BHOPAL. He worked for Maharashtra electricity Board and NTPC Ramagundam for 5 years before joining DRDO in 1986. He was involved in environmental testing of missile systems for 25 years, during which he developed innovative test methods, and designed and developed indegenous environmental test systems which were banned due to embargo on account of Missile test and control regime. Later he went on to become project Director PGM, and had successfully developed technology for PGM's. He was Associate Director of Research centre Imarat, and super annuate in 2018 june. He completed his doctorate in "electronic packaging of aerospace systems from random vibration perspective"from NIT Warangal.

He is a receipt of
1. DRDO path breaking award for Agni missile systems.
2. DRDO path breaking award for program AD.
3. DRDO Scientist of the year award in the year 2014.

Mr.B.N.Murty

Mr.B.N.Murty director of Mechtrolin Industrials – Hyderabad

Dr. P.Chander Sekar

1. Robotic hand for BARC-1979
2. Earth quake Monitoring System –1985 Roorkeee University
3. Control System for Space simulation chamber –ISRO
4. Control System for High vacuum high temperature furnace – DMRL
5. Motorised wheel chair, Foldable stretcher and Robotic platforms –Defence Applications
6. Artificial Arm for amputee hand personal , Corner shot GUN for Defence Applications
7. Video Guided Automatic Brush (Dental Systems_ Australia)
8. Solar Powered cooling system and Micro Film (NANO Technology) Speaker

Currently working on : **World's largest clock, waterfall and artificial aquarium.**

Dr. J Gopal Rao

He is a Research Associate at IIT Kanpur from 1970-71,Lecturer at BITS, Pilani from 1971-72, Addl. General Manager at ECIL Computer Group from 1972-2000, Head SCADA Systems at CMC Limited, Hyderabad from 2000-2004,Professor at MVSR Engineering College, Hyderabad from 2006-2013 and Professor at Mahindra École Centrale college of enginnring,Hyderabad from 2014 todate

Dr T.Naveen Kumar

He is a alumini of Osmania University, joined as a Section Engineer in the South Central Railways and shifted to AP Medical Housing Infrastructure Development Corporation . After working briefly, he moved to APPower Generation Corporation (APGENCO) as Assistant Engineer. He is

presently with TSGENCO (Due to formation Telangana State) in the post Executive Engineer/Hydel Designs. He recently acquired (2018) Ph.D degree from Osmania University. Having 25 years of Structural design experience in the area of Multistory buildings, Industrial structures and Hydro Power Stations. He is presently associated with Structural designs of Pump House and allied structures of prestigious project "Kaleshwaram Lift Irrigation Scheme", Govt of Telengana.

Mr. S Venkateswara Rao

S Venkateswara Rao currently the Director, AMD India Private Limited. Had 30+ years of experience, including 20 years in VLSI Industry and 20 years of Teaching experience in diverse roles and responsibilities. Accountable for design and delivery of Multimedia IPs (Audio and Video).

Before joining AMD in 2010, Mr. Rao worked in Nvidia Graphics Private Limited as Senior Engineering Manager, System Engineering Group. Mr. Rao also worked in Qualcore logic, Portal Player, CMC, Moschip Semiconductor Technology and Agnitron Chip Designs. Before moving to industry, he served as an Associate Professor and Lecturer in Department of Electronics & Communication Engineering, MVSR Engineering college and visiting faculty in University College of Engineering OU, JNTU Hyderabad

Mr. Devender Reddy.

Devender has held various leadership roles at Xerox India, Lexmark International and Metro Cash and Carry. Extensive experience in Sales, Business Development, Key Account Management, Channel Management,Team Management, and as a Turn Around Specialist. After spending 18 years in corporate world he took Plunge in 2014 and started Alliance TechServ primarily into Manage Print Services. Devender Reddy Forayed into Electric Vehicles Industry in 2018 and expanding footprint across south India through channel partners

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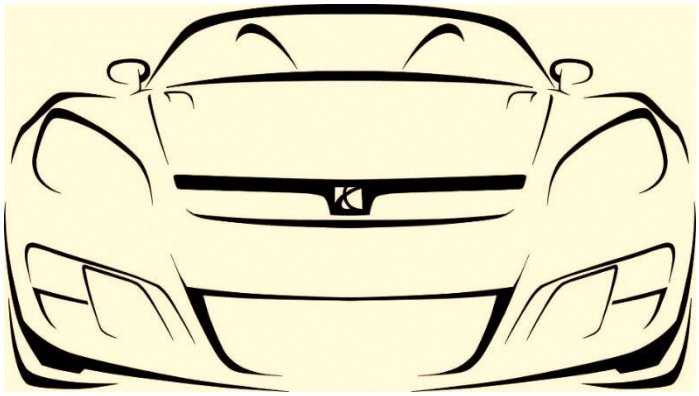
Contents

DEPARTMENT OF

AUTOMOBILE ENGINEERING



DEPARTMENT OF AUTOMOBILE ENGINEERING

VISION

To Produce Professionally Confident and Responsible Engineers with the Knowledge and Skills in Vehic1e Designing, manufacturing and testing of Automobiles to meet ever changing needs of **the** Global Automotive Industry and the Society.

MISSION

The department strives to provide the engineering foundation as well as professional, innovative and leadership skjlls to the students through the following activities:

- Laying sound foundation in the areas of mechanics, design, thermal sciences and production processes, as well as allied areas.
- Enrich the undergraduate experience through experimental learning, and fostering a personalized and supportive environment that makes learning joyful and stimulating
- Provide opportunities to design mechanical engineering components and systems to meet specific needs through select courses
- Provide opportunities to develop good communication skills, and to encourage creativity and entrepreneurial
- Create awareness in professional responsibility, ethics, global impact of engineering solutions, and of the need for life-long learning.
- Providing opportunities for training in the latest automotive technologies and encourage product development.
- Providing research and intellectual resources to address contemporary and complex problems of industry and to advance research and applications.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Automobile Engineering discipline has curriculum much in common with Mechanical Engineering and incorporates skills and expertise in the areas which are essential to most sectors of industry, and has specific orientation to the automobile industry.

Bachelor's programmer in Automobile Engineering in the college is aimed at preparing graduates who will,

- Establish themselves as successful professionals while working independently or in multidisciplinary teams demonstrating professional, ethical and societal responsibilities.
- Have high levels of technical competency and problem solving skills to generate innovative solutions to engineering problems including in areas specific to automobiles.
- Continuously enhance their skills through training, independent inquiry, professional practices and / or pursuit of higher education or research.
- Advance in their professional careers including increased technical and managerial responsibility as well as attainment of leadership

Department of Automobile Department

PROJECT TITLES

S. No	Project title
1	Personal Transport Vehicle (Standing)
2	Personal Transport Vehicle
3	Design of Electrical Vehicle For Physically Challenge
4	Ergonomics of Driver Seat of A Scooter (Activa)
5	Electrical Car
6	Go cart
7	Quad Bike
8	Drift Cart

DESIGN AND FABRICATION OF PERSONAL TRANSPORT VEHICLE (STANDING)

PROJECT ID: 2451-16-769-009.015.040.037.308

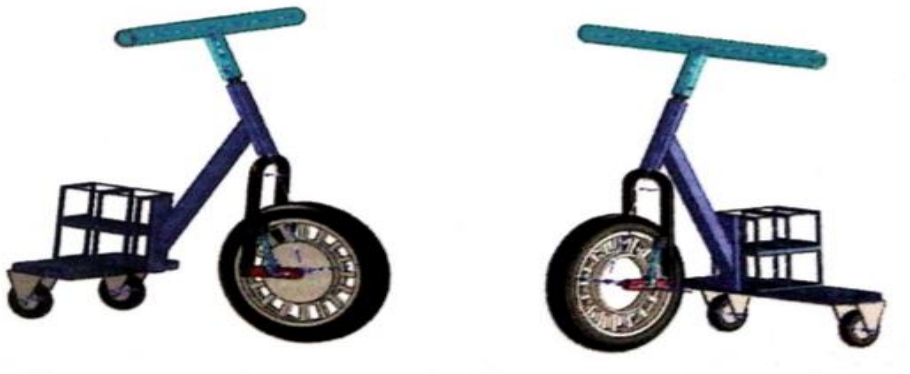
GUIDE: Mr. M. Pandarinath

DEPARTMENT: Automobile Engineering

ABSTRACT:
Among various types of vehicles passenger, heavy load carrying or vehicles built to carry 4-5 people, all of them have I.C. Engines driven by petrol or diesel. There has however emerged a third category of vehicles, which finds its use for Gated Communities, large factories where daily commuting is within 5-10 km and speed Requirements are well within 40km/h. These new category of vehicles are called Personal transport vehicles. Here power requirements range between 1/3-2 h.p. Battery specification is about 48-60 V and capacity up to 24 A-h. vehicle giving about 40-80 km per charge or battery depending upon capacity. Brake power of Motor used is about 500-1800 Kw.

TOOLS USED:ANSYS, SOLID WORKS, ARC WELDING

FUNCTIONAL BLOCK DIAGRAM:



APPLICATIONS: Useful for short distance traveling.

COURSES APPLIED: mechanics of materials, material testing,and automotive transmission.

IMAGE OF THE PRODUCT:

ORIGINAL AUTHORS:

S.ANAND	-	05-09-6008
BURUGU RAHUL	-	05-09-6010
N.DEVENDER	-	05-09-6025

DESIGN AND FABRICATION OF PERSONAL TRANSPORT VEHICLE

PROJECT ID: 2451-16-769-004.024.040.310

GUIDE: Mr. M. Pandarinath

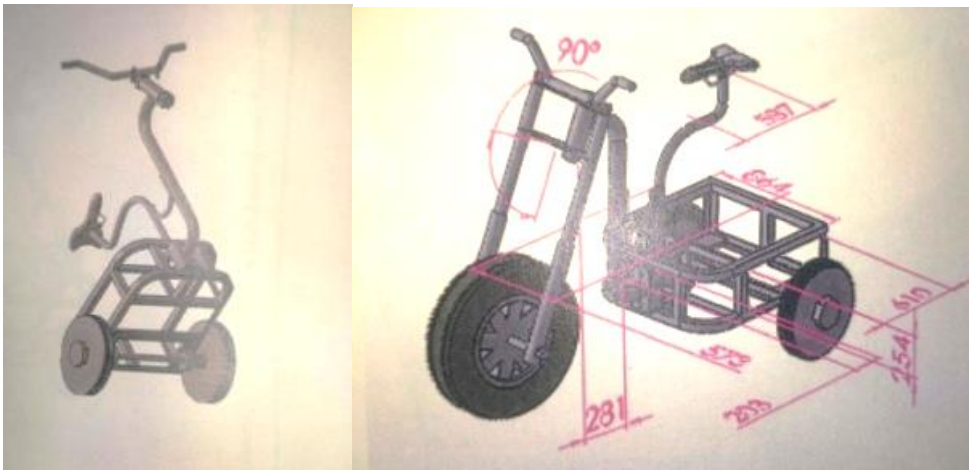
DEPARTMENT: Automobile Engineering

ABSTRACT:

Among various types of vehicles passenger, heavy load carrying orvehicles built to Carry 5 people, all of them have I.C. Engines driven by petrol or diesel. There has However emerged a third category of vehicles, which finds its use for Gated Communities, large factories where daily commuting is within 5-10km and speed Requirements are well within 40km/h. these new category of vehicles are called Personal transport vehicles. Here power requirements range between 1/3-2 h.p. Battery specification is about 48-60 V and capacity up to 24 A-h. Vehicle giving About 40-80 km per charge or battery depending upon capacity. Brake power of Motor used is about 500-1800 Kw.

TOLLS USED:ANSYS, SOLID WORKS, ARC WELDING

IMAGE OF THE PRODUCT:



APPLICATIONS: Useful for short distance traveling.

COURSES APPLIED: mechanics of materials, material testing, automotive transmission.

ORIGINAL AUTHORS:

V.BHASKER REDDY - 2451-11-769-008
G.SAI KIRAN - 2451-11-769-045
K.YASHWANTHA RAO - 2451-11-769-052
M.SAI CHETAN - 2451-11-769-053

DESIGN OF ELECTERICAL VECHICLE FOR PHYSCIALLY CHALLENGED

PROJECT ID: 2451-16-769-305.311.044.017.009.008
GUIDE: M. Pandarinath
DEPARTMENT: Automobile Engineering

ABSTRACT:

The project comprises the development of an electric power unit to be retrofitted to manual wheelchair providing the wheelchair user or an attendant with drive, steering and regenerative braking at a much lowest cost than a standard power chair. Power requirement in this category range from 0.34hp – 0.35hp.

Battery specification is about 48v and capacity up to 24 A-h.
Weight of the vehicle is around 54kg.
Brushless DC motor of yucheng EM001 is used.
Brake power of the motor used is about 150-250w

TECHNOLOGIES USED

- Electrically operated using lead acid battery.
- Hub motor of BLDC is provided with electronic commutation
- Electric vehicle controller is provided between the battery and motor.

APPLICATION

- Used for physically handicapped
- A person can move with speed nearly equal to 21 kmph.

TOOLS USED

- Ansys
- Solid works

IMAGES OF THE PRODUCT:

ERGONOMICS OF DRIVER SEAT OF A SCOOTER (ACTIVA)

PROJECT ID: 2451-16-769-307.005.042.011

GUIDE: Mr M.Pandarinath

DEPARTMENT: Automobile Engineering

ABSTRACT:

- Automobile seat design in current practice requires satisfying the ergonomics guidelines as well as considers the comfort expectations.
- The main aim is to re-examine the existing scooter seat designs and to propose a novel seat design for better comfort.
- The number of scooters reviewed for driver's seat features and user comfort are based on the analysis using a vibrometer.
- Through this work, the basic seat needs while driving, for example pain preclusion aspects and comfort weightage are defined.

TECHNOLOGIES USED:

- Laser Doppler Vibrometer (LDV).
- Horizontal and Verical springs are used in drivers' seat.
- Shock Pulse Monitoring (SPM) Lenovo infinity.
- Vibration monitoring.
- Vibration measurement and analysis with Evaluated Vibration Analysis Method (EVAM).

APPLICATIONS:

- Used for long distance driving.
- Used for people suffering from back pain, as there are less vibrations.

TOOLS USED:

- Erogonomics.
- Statistical distribution.
- Seating dynamics.

IMAGES OF THE PRODUCT:

DESIGN AND FABRICATION OF ELECTRIC VEHICLE

PROJECT ID: 2451-16-769-031.301.007.016.023.022
GUIDE: Mr. M. Pandarinath.
DEPARTMENT: Automobile Engineering.

ABSTRACT: Electric vehicle is a modern invention that will replace all fuel consuming automobiles in future. The basic difference is that the traditional vehicles have an I.C engine which release exhaust gases harmful to environment whereas electric vehicles use a dc motor .This invention revolutionized the automobile industry mainly because it reduces air and noise pollution. The maintenance cost is also reduced by using electric vehicles.

The battery capacity is 48 volts (12 volts each *4 in no.) and the motor used is BLDC motor of 1300 watts. The vehicle can travel up to 100km on a single charge of 7 hours. By 2030 India is going to use completely electrical vehicles.

TECHNOLOGY USED: SolidWorks, Ansys, Lotus Shark.

APPLICATIONS: Regular commuter.

COURSES APPLIED: Mechanics of Materials, Material Testing and Automotive Chassis Components.

IMAGES:

ORIGINAL AUTHORS:

B. Sai Bhargav: 2451-14-769-015
S . Vijay kumar: 2451-14-769-16
V. Navya sree: 2451-14-769-032
CH. Ganesh : 2451-14-769-038

TEAM MARQUES -GO KART

PROJECTID: 2451-16-769-045.044.043.00.006
GUIDE: Mr M. Pandarinath
DEPARTMENT: Automobile engineering

ABSTRACT:
To spread awareness on motor sports and to create interest on chopping, cutting, grinding, welding and various skills of building a vehicle. Students get hands on experience on basic principles of motorsports and engineering. We are proud of our team building strong, flexible and top notch skills. Other than these skills, we build Team spirit and pass through many more memorable moments.

TECHONOLOGIES USED:

- Modified engine of Honda CB Shine(132cc)
- Customized exhaust
- Parts like break disc hub, steering hub were designed and made in CNC machine.

APPLICATIONS & USES:

It is a low capacity high performance 4 wheeled gokart. The engine used in gokartis a modified Honda CB Shine of 132cc, single cylinder, air cooled, SI Engine. This go kart is made whole and solely for racing purpose.

Tools Used:

- ✓ Auto CAD
- ✓ Solid works
- ✓ ANSYS

IMAGES:

DESIGN AND FABRICATION OF QUAD BIKE

PROJECT ID: 2451-17-769-006.015.045.046
GUIDE: Mr.Pandarinath.
DEPARTMENT: Automobile Engineering.

ABSTRACT: A Quad Bike is an All-Terrain vehicle which has bike like structure and runs on four-wheels. It is powered by I.C Engine with a torque of 19.12N-m@7000 rpm, BHP of 20.80N-m@8500rpm and can attain a high speed of 72km/hr. It has a 4x2 drive system. It is designed to run on off-road terrain like hills, muddy areas, sand .Its main purpose is to travel across these rough terrains by farmers, soldiers and to provide a good off-road recreational experience for a weekend enthusiast. It can drag a maximum load of 1.5-1.8 tones helping the farmers the farmers carrying the basic agricultural equipment.

TECHNOLOGY USED: Solid Works, Ansys, Lotus Shark.

APPLICATIONS: Off-road usage, Military usage, Agricultural usage, Recreational usage, other sports uses.

COURSES APPLIED: Mechanics of Materials, Material Testing, Automotive Chassis Components and Automotive Petrol Engines.

IMAGES:

DESIGN AND FABRICATION OF DRIFT CART

PROJECT ID: 2451-16-769-025.033.039

DEPARTMENT: Automobile Engineering

GUIDE: Mr. M. Pandarinath
Mr. M.L.Bagawan

ABSTRACT: As drifting is an amazing form of driving, and is dreamt by every motor enthusiast, it is also a dangerous act when an inexperienced person tries to drift a car in the wrong environment keeping others life's at a stake. Drifting a car comes at its own costs considering tyre wear and unwanted damages which is expensive; hence people avoid taking the risk to drift their cars.

DRIFT CART: is a battery powered cart which is intended to MINIMISE RISK and MAXIMISE FUN, the drift cart uses castor wheels to achieve the drifting effect and cutting the cost of tyre wear, the drift cart can be used on any flat surfaces either indoor or outdoor making it accessible to anyone who wants to enjoy drifting in place where you can't drift a car.

TECHNOLOGY USED: Solid works, ANSYS, TIG welding

APPLICATIONS: short distance travelling, performing tricks, etc can be used indoors as well as outdoors.

DEPARTMENT OF

CIVIL ENGINEERING

DEPARTMENT OF CIVIL ENGINEERING

VISION

To nurture the Civil Engineering Student fraternity and focus in right areas so that we can contribute to the nation's growth by providing talented and technically competent professionals while making the teaching - learning process an enjoyable experience.

MISSION

To produce an engineer who can adopt an integrated approach to various problems in Civil Engineering and judiciously use research and technology to benefit the society at large.

- Adopt an integrated approach to various problems in civil engineering
- judiciously use knowledge of civil engineering
- Use latest research and technology
- Benefit the society

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Program educational objectives are broad statements that describe the career and professional accomplishments that the program is preparing the graduates to achieve.

- A strong foundation in mathematics, basic sciences and engineering fundamentals, to successfully compete for entry-level positions or pursue postgraduate programme in Civil Engineering and related fields.
- Contemporary Civil Engineering professional skills, collection, analysis / interpretation and presentation of data, including hands-on laboratory experience, exposure to modern software, creativity, and innovation to successfully compete in the local, national and global market.
- Strong communication and interpersonal skills, broad knowledge and an understanding of multicultural and global perspectives to work effectively in multidisciplinary teams, both as team members and leaders.
- Integral development of the personality to deal with ethical and professional issues, taking into account the broader societal implications of civil engineering and also develop independent and lifelong learning.

DEPARTMENT OF CIVIL ENGINEERING

PROJECT TITLES

S. No	Project title
1	TILES USING PLASTIC AND WASTE AGGREGATE
2	EXPERIMENTAL EVALUATION OF SHEAR STRENGTH OF CONCRET
3	DEVELOPMENT IOF FLOOD FORECASTING MODEL
4	RETROFITTING A BEAM USING FRCC AND GFRP
5	POROUS CONCRETE PAVEMENTS
6	RECYCLED CONCRETE AGGREAGTE
7	FEASIBILITY STUDY AND MIX DESIGN OF POROUS ASPHALT WITH WASTE PLASTIC
8	USAGE OF BIOLOGICAL WASTE AS AN ADMIXTURE FOR IMPROVING BLACK COTTON SOIL
9	FOAM DUAL FILTER
10	GEOSPATIAL ASSESSMENT AND EVALUATION OF GROUND WATER QUALITY DUE TO LANDFILL LEACHTE
11	VERMICULITE CONCRETE

TILES USING WASTE PLASTIC AND WASTE AGGREGATE

PROJECT ID : 2451-15-732-007.022.047.060.
GUIDE : Dr.R.Sandhya Rani, Associate Professor
DEPARTMENT : CIVIL ENGINEERING

ABSTRACT: Plastic being environmental hazardous and non-biodegradable material is a severe threat to the environment. The main objective of this project is to verify whether the plastic is used as binder and increase the stability of tiles. Plastic if used as a binder it has the advantages of using non-decomposable plastic, usage of waste aggregate, effective replacement of a binding material and also an economical construction. The tiles such prepared can be used for footpaths and parking lots. The extension of this idea may also reflect the construction of plastic roads.

METHODOLOY: Plastic waste is converted to liquid by heating at certain high temperatures then the waste aggregate is added to it followed by thorough mixing. The material is shifted to the mould by compacting. The above process is repeated by taking the different percentages of waste plastic varying from 20% to 60%, rest of which is waste aggregate. Compression tests were conducted for finding optimum percentage of Plastic and checked for any loss in strength after soaking for 24 hours and after oven heating @50 degrees Celsius for 6hours.

APPLICATIONS:

1. Usage of waste plastic
2. Cost effective
3. Usage of aggregate from demolished buildings
4. It gives strength as same as conventional tile.

COURSES APPLIED: Geotechnical Engineering.

IMAGES OF THE PRODUCT:



EXPERIMENTAL EVALUATION OF SHEAR STRENGTH OF CONCRETE

PROJECT ID : 2451-15-732-064.068.071.110.321
GUIDE : Mr R.Prashanth Kumar
DEPARTMENT : CIVIL ENGINEERING

ABSTRACT:
It is extremely difficult to make a test of concrete which will determine the shearing strength. Other stresses, tensile, bearing, and web stresses complicate the problem, and their action may be the controlling element of failure even when shearing action is the apparent cause. The form of test piece to be used was the first point to study, and one purpose of these tests was to find the effect of different forms of test pieces and learn what form is open to the least objection. Two methods of testing were used. In the first, a hole was punched in a concrete plate or block, and this method will be referred to as a punching test. The second method consisted in breaking a short concrete beam which was restrained at the ends. This method will be referred to as the restrained beam test.

COURSES APPLIED: Structural Engineering

IMAGES OF THE PRODUCT:

DEVELOPMENT OF FLOOD FORECASTING MODEL

PROJECT ID : 2451-15-732-002.005.023.026
GUIDE : Dr. C.S.V.Subrahmanya Kumar
DEPARTMENT : CIVIL ENGINEERING

ABSTRACT : For flood forecasting and flood plain mapping, various hydrodynamic models, based on hydraulic routing, have been developed and applied to different rivers in the past using computer technology and numerical techniques. Channel roughness is the most sensitive parameter in development of hydraulic model for flood forecasting and flood plain mapping. Hence, in the present study it is attempted to calibrate the channel roughness coefficient (Manning's "n" value) along a river surface through simulation of floods using HEC-RAS. The most effective single manning's roughness coefficient is calibrated for the given reach of the river. The performance of this "n" value is validated with available future flood data. The flood forecasting and flood plain mapping using this HEC-RAS manning's roughness coefficient should yield best result. Furthermore, the calibrated Manning's roughness coefficient works best for high flow only, which needs to be verified for lean flows in the focus reach.

METHODOLOGY : The Channel geometry, boundary conditions, channel resistance and inflow &outflow flood hydrographs are required for conducting flow simulation through HEC-RAS.For the selected reach of the river different values of Manning's roughness coefficient(n) are assumed and the Nash and Sutcliffe efficiencies for each of these "n" values are calculated. The value of "n" with maximum efficiency is used to continue the research To arrive some optimal value for aforementioned model, the simulated flow hydrograph will be compared with observed flow hydrograph at the selected river reach.Nash and Sutcliffe efficiency test has been used for comparison of simulated flow hydro-graph with the observed flow hydrograph for various Manning's "n". The comparison of observed and simulated flow hydrograph (calibration) is done graphically. The calibrated HEC-RAS based model will be used to simulate the future flood and is validated using the observed flood hydrograph

APPLICATIONS : The most effective single manning's n is calculated, flood plain mapping IS DONE.

COURSES APPLIED : Water Resources Engineering, Fluid mechanics.

IMAGES OF THE PROJECT:

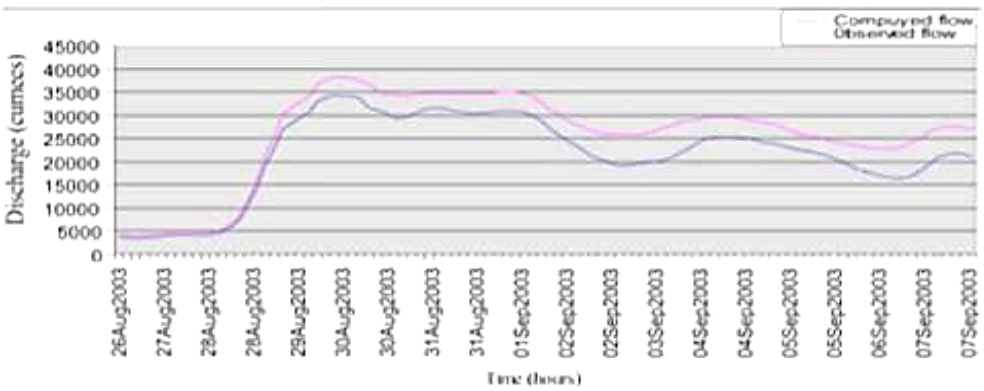


Figure 2. Observed and simulated flow hydrograph at Munduli (calibration).

RETROFITTING A BEAM USING FRCC AND GFRP

PROJECT ID : 2451-14-732-072.317.320.092.
GUIDE NAME : Mrs.R.Sreeranjani
DEPARTMENT : Civil engineering

ABSTRACT:

- All most every Reinforced Cement Concrete Structure (RCC) subjected to deterioration, due to ageing, poor maintenance, corrosion result in reduction of the strength of the members.
- A Conventional, Compatible and Economical design of Retrofitting method is proposed using fiber reinforced concrete plates.
- These FRCC (Fiber Reinforced Cement Concrete) plates are expected to overcome the problems associated with the earlier techniques like externally bonded steel plates and FRP (Fiber Reinforced Polymer) laminates which are due to the mismatch of their tensile strength and stiffness .

METHODOLOGY;

- CASTING OF BEAMS: 18 Beams, among them 9 are Shear Deficient (SD) and remaining are Flexure Deficient (FD)
- Test to be carried out on 6 control beams (3 SD, 3 FD)
- 0n the remaining beams a load of 70% of ultimate load is applied and retrofitted with FRCC and GFRP Plates
- These retrofitted beams are again loaded up to failure loading
- Therefore the strength of retrofitted beam should be greater than the strength of control beam
- Perfect material is to be suggested among FRCC and GFRP plates

CONTROL BEAMS: The beam on which 100% load (ultimate load) is applied is known as control beam

RETROFITTING BEAM: The beam on which 70% of the ultimate load is applied and then retrofitting material is applied, such a beam is known as retrofitting beam.

COURSES APPLIED: STRUCTURES.
APPLICATIONS:

- Restoration and retrofit of earthquake damaged building and
- Retrofitting of existing vulnerable buildings that have experienced earthquakes.

IMAGES OF THE PROJECT:

POROUS CONCRETE PAVEMENTS

PROJECT ID : 2451-15-732-032.035.038
GUIDE : Mr G.Narendra Goud and Mrs K.Shwetha
DEPARTMENT: CIVIL ENGINEERING

ABSTRACT :
Pervious concrete is a special high porosity concrete used for flatwork applications that allows water from precipitation and other sources to pass through, thereby reducing the runoff from a site and recharging ground water levels. Its void content ranges from 18-35% with compressive strengths of 400-4000psi (28-281 kg/cm^2). The infiltration rate of pervious concrete will fall into the range of 2-18 gallons per minute per square foot (80-720 litres per minute per square meter). Typically, pervious concrete has little or no fine aggregate and has just enough cementitious paste to coat the coarse aggregate particles while preserving the interconnectivity of the voids. Pervious concrete is traditionally used in parking areas, walk ways and contributes to sustainable construction

APPLICATIONS:

- Parking areas
- Walk ways in parks and gardens
- Residential streets
- Basketball and badminton courts

COURSES APPLIED: concrete technology

IMAGE OF THE PROJECT:

RECYCLED CONCRETE AGGREGATE

PROJECT ID : 2451-15-732-009.011.028.
GUIDE : Mrs Saroj mini
DEPARTMENT : CIVIL ENGINEERING

ABSTRACT : Globally, the utilization of concrete particularly concrete has been increasing day-by-day due to rapid industrialization and infrastructural developments. An enormous quantity of natural coarse aggregate is required for making concrete to meet the huge demand. The natural resources of coarse aggregate are depleting rapidly all over the world and urgently need to be conserved. On the other hand, millions of tonnes of construction and demolition (C&D) wastes are being generated from different sources. The disposal of these huge quantities of C&D waste is posing a big problem to the local administration and environment. Further, there are areas where the natural coarse aggregates are scarcely available and are hauled from long distances. These issues have to be addressed urgently. A review of the literature suggests that obtaining the coarse aggregates from C&D waste is a possible solution to these issues. Therefore, in the present work, an experimental attempt has been made to utilize the recycled coarse aggregate (RCA) from C&D waste to the maximum possible extent for producing the concrete.

APPLICATIONS: Road construction, Base or fill for drainage structures, Bank protection, Usage of aggregates from demolished buildings.

COURSES APPLIED: concrete technology

IMAGES OF THE PRODUCT:

FEASIBILITY STUDY AND MIX DESIGN OF POROUS ASPHALT USING WASTE PLASTIC

PROJECT ID : 2451-15-732-017.019.029.043
GUIDE : Mr.Narendra Goud
DEPARTMENT : CIVIL ENGINEERING

ABSTRACT:

Multistoried commercial and residential buildings, which significantly increase the demand of water supply are increasingly being constructed in urban India. Urban flooding is one of the major problems we face every monsoon now-a-days. This leads to the loss of life and damage to the property. The main reason is due to inappropriate rain water management and infrastructure development. Architects and civil engineers must be pro active and integrate rainwater harvesting techniques in design of all types of building, parking lots and low traffic streets. For example, public works department (buildings and roads) engineers can integrate public buildings with porous asphalt parking lots. This would recharge the ground water in over exploited areas of the country.

METHODOLOGY:

The technology is really quite simple. The secret to success is to provide the water with a place to go, usually in the form of an underlying, open-graded stone bed. As the water drains through the porous asphalt and into the stone bed, it slowly infiltrates into the soil. The stone bed size and depth must be designed so that the water level never rises into the asphalt. This stone bed, often 18 to 36 inches in depth, provides a tremendous sub-base for the asphalt paving. Porous asphalt pavements are of great interest to site planners and public-works departments. With the proper design and installation, porous asphalt can provide cost-effective, attractive pavements with a life span of more than twenty years, and at the same time provide storm-water management systems that promote infiltration, improve water quality, and many times eliminate the need for a detention basin.

COURSES APPLIED: Transportation Engineering

IMAGES OF THE PRODUCT:

USAGE OF BIOLOGICAL WASTE AS AN ADMIXTURE FOR IMPROVING BLACK COTTON SOIL

PROJECT ID : 2451-16-732-009.020.072.17-732-066.
GUIDE : Dr. R. Sandhya Rani, Associate Professor
DEPARTMENT : Civil Engineering.

ABSTRACT : Black cotton soil shows different properties like swelling and shrinking during wet and dry conditions. Ground improvement techniques like Soil Stabilization is employed to improve mechanical behaviour of this soil. In the current study, an attempt has been made to use biological waste such as coconut coir ash, rice husk ash, wood ash, sugarcane pulp ash, coconut shell ash to improve mechanical behaviour of soil. Different proportions of these admixtures with small amount of lime have been used in determining swell and strength characteristics. Experimental investigation like unconfined compressive strength test (UCS) have been conducted for samples that are cured for 7 and 28 days.

METHODOLOGY : A clayey sample from Sunnam Cheruvu was collected and different materials like coconut coir ash, rice husk ash, wood ash, sugarcane pulp ash, coconut shell ash, are added to the sample, in different proportions at optimum moisture content and checked for the strength. It is noticed that the strength properties were improved.

APPLICATIONS :

- Strength of the soil increases.
- Economical and environmental advantage due to usage of organic wastes to improve the properties of soil.

COURSES APPLIED: Geotechnical Engineering.

IMAGES OF THE PROJECT:



ORIGINAL AUTHORS : 2451-12-732-002.005.008.020.024.025.040.070.076.078.084.087.090.091.094.097.098.315.323

FOAM DUAL MEDIA FILTER

PROJECT ID : 2451-16-732-064.068.081.095.
GUIDE : Shilpa Mishra ,Assistant professor
DEPARTMENT : CIVIL ENGINEERING

ABSTRACT : In the present study in search of a new filtration media which would be suitable for treating water with low turbidity especially the rain water an attempt is made to investigate in details. The performance of single sand media and combination of sand and foam was studied. Study mainly focus on finding out the optimum operating conditions under which filter would give its best performance. Similar studies were also conducted on dual media filter having combination of sand and foam to find out the performance. Under this combination foam was consider as one of the media in the present study with a view that sponge is easily handled and washed when it gets chocked. And thus, it will be very convenient in a filter of rain water harvesting.The foam media at the top would facilitate easy cleaning of filter in case of rain water harvesting system as well as better removal of finer suspended solid impurity and microbial impurity.

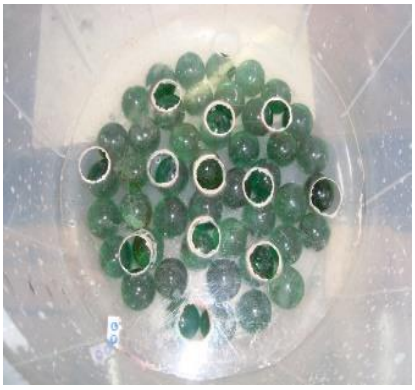
METHODOLOGY:

Deciding the optimum flow rate the studies were conducted by varying initial turbidity from0.5 NTU to 8 NTU and keeping the other variables constant as previous and optimum flow rate obtained from earlier experiments. In this case an optimum initial turbidity was decided based on the filtration study and then keeping optimum flow rate and influent turbidity constant from earlier studies and varying Effective size and uniformity coefficient the optimum filter media characteristics were found out which will give the best filtration treatability. On deciding the optimum sand filter media combination experiments were further conducted by combining sand media with foam. The depth of the foam was varied with 2cm and 4.5cm. Flow rate was again varied to recheck the combinations at which it gave better performance. Based on the performance the best suitable combination of dual media was finalized.

APPLICATIONS : In rain water harvesting, surface water filtration, canal water filtration.

COURSES APPLIED : Environmental Engineering.

IMAGES OF THE PROJECT:



GEOSPATIAL ASSESSMENT AND EVALUATION OF GROUND WATER QUALITY DUE TO LANDFILL LEACHATE

PROJECT ID : 2451-15-732-054, 2451-16-732-002,013
GUIDE : Dr. C.V.S Subramanyam & Dr. Sandhya Rani
DEPARTMENT : CIVIL ENGINEERING

ABSTRACT: In the present study, an attempt is made to measure the impact of municipal solid waste landfill on groundwater quality around Nagole. Groundwater samples were collected from wells, 2km radius around the dumping site & were analyzed in various parameters such as DO, pH & BOD etc. during pre-monsoon & post-monsoon seasons.
The GIS software was used to prepare spatial distribution maps & groundwater quality index to assess the overall quality of groundwater.
The study revealed that during pre-monsoon & post-monsoon periods the groundwater contained pollutants at a level beyond the permissible limit set by BIS. However, it was found that the concentrations of water quality parameters are lower during post monsoon period.
TECHNOLOGY USED: GIS

APPLICATIONS: It is used to determine groundwater quality.

COURSES APPLIED: Water Resources Engineering & Soil Mechanics.

IMAGES OF THE PRODUCT:

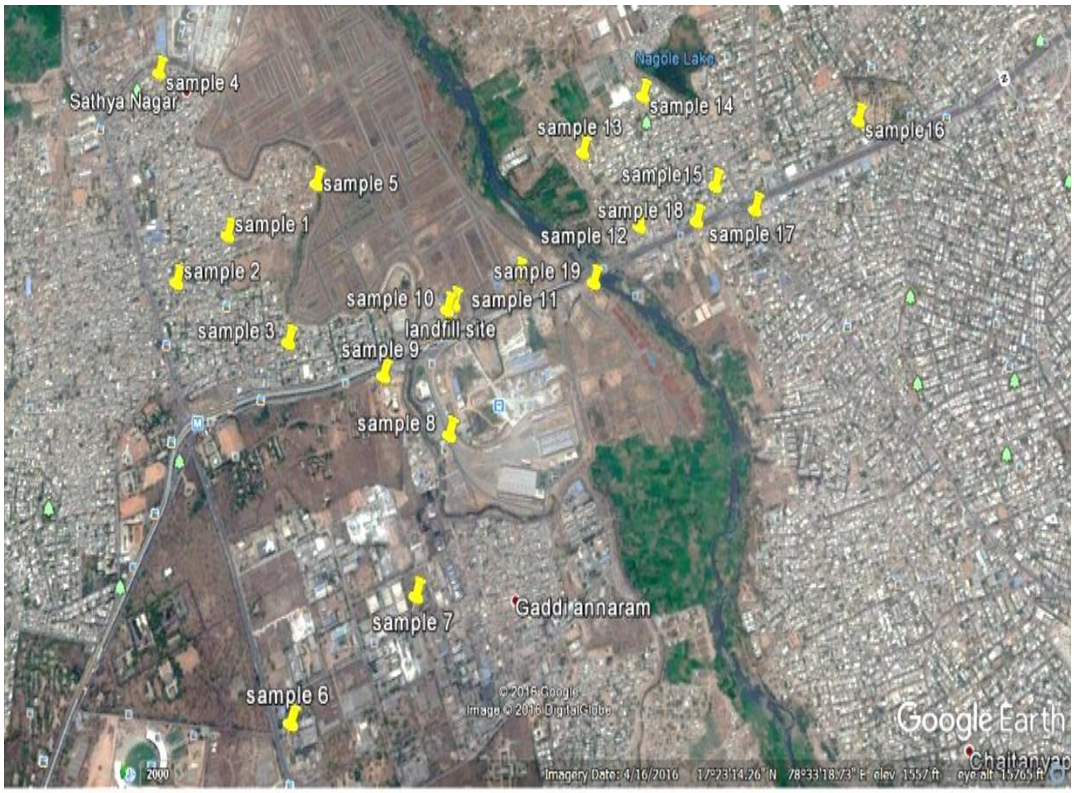


Fig 3.1 Location of Water samples collected from the bore well.

ORIGINAL AUTHORS: -2451-14-732-051.110,309.311.13-109.

VERMICULITE CONCRETE

PROJECT ID : 2451-16-732-83.91.317.320
GUIDE : Mr.S. Praveen Kumar
DEPARTMENT : Civil Engineering

ABSTRACT : concrete is the single most widely used construction material in the world. Aggregates generally occupies 60 to 80% of volume of concrete and greatly influence its properties, mix proportions and economy. In this study fine aggregate is partially replace with vermiculite. Use of vermiculite in concrete will enhance the shrinkage and crack resistance and reduces environment impact and also reduce the cost. In this present study an attempt has been made to study the mechanical properties like compressive strength of M30 grade concrete**.**

METHODOLOGY: Mix design is a process of selecting suitable ingredients of concrete and determine the relative amounts with the objective of producing a concrete of the required strength, durability and workability as economically as possible

The following are the requirements of concrete mix design:

1. The minimum compressive strength required from structural consideration

2. The adequate workability necessary for full compaction with the compacting equipment available

3.Maximum water cement ration and cement ratio content to give adequate workability for the particular site conditions and to avoid shrinkage cracking due to temperature cycle in mass concrete etc..,

APPLICATIONS : many applications like wide filling insulation mixes around, chimneys, back boilers, fire backs, swimming pool bases, used in air entering concrete etc..,

COURSES APPLIED: Concrete Structures And Technology

IMAGES OF THE PROJECT:



Original Authors: 2451-14-732-003.004.005.042.049.

DEPARTMENT OF

COMPUTER SCIENCE AND ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

VISION

To impart technical education of the highest standards, producing competent and confident engineers with an ability to use computer science knowledge to solve societal.

MISSION

- To make learning process exciting, stimulating and interesting.
- To impart adequate fundamental knowledge and soft skills to students.
- To expose students to advanced computer technologies in order to excel in engineering practices by bringing out the creativity in students.
- To develop economically feasible and socially acceptable software.

PROGRAM EDUCATION OBJECTIVES (PEOs)

The Program Educational Objectives of under graduate program in Computer Science & Engineering are to prepare graduates who will:

- Have strong fundamental concepts, technical competency and problem solving skills to generate innovative solutions to engineering problems.
- Continuously enhance their skills through training, independent inquiry, professional practices and pursue higher education or research by adapting to rapidly changing technologies.
- Advance in their professional careers including increased technical, multidisciplinary approach and managerial responsibility as well as attainment of leadership positions thus making them competent professionals at global level.
- Exhibit commitment to ethical practices, societal contributions and lifelong learning.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROJECT TITLES

S.No	PROJECT TITLES
1	Garbage Monitoring and Collection Assistance
2	Wearable Gadget For The Blind
3	Voice Controlled Robot
4	Air Quality Monitoring System using IOT
5	Student Assistant
6	Prediction of Wine Quality using Machine Learning in Python
7	Banking System
8	Fingerprint Based Security System
9	Instant Messaging Security
10	Mixed Reality
11	Importance of Feature Selection on Deep CNN Features Used for Image Classification
12	Security Camera Notifier
13	Detect, Vision & Speech System(Dvs System)
14	Heart Disease Estimation
15	Analytics of Air Pollution
16	Gesture Recognition
17	Classification Of Deformation Complexity Of Images For Image Registration
18	General Election Using Blockchain
19	Prediction Of Wine Quality Using Machine Learning In Python
	Siamese Patch Based Image Matching With Cnn

GARBAGE MONITORING AND COLLECTION ASSISSTANCE

PROJECT ID : 2451-17-733-122.123.126
GUIDE : B.Saritha, Asst. Professor
DEPARTMENT : Computer Science And Engineering

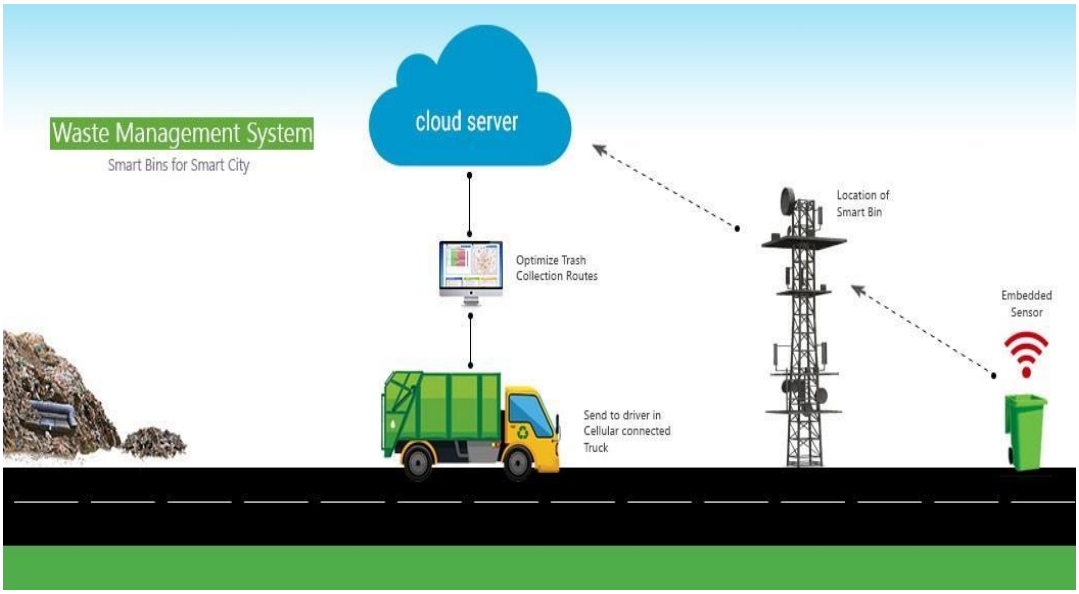
ABSTRACT:
Many times, in our city we see that the garbage bins or dustbins placed at public places which are overloaded. It creates unhygienic conditions for people as well as makes the place ugly leaving bad odour. To avoid all such situations we are going to implement a project called Garbage Monitoring and Collection Assistance. These dustbins are interfaced with ultrasonic sensor along with central system showing current status of garbage, on Thingspeak server and displays the GPS coordinates on Blynk app. Whenever the garbage reaches a threshold value it sends the notification to concerned person using IFTTT. The main aim of this project is to reduce human resources and efforts along with the enhancement of a SMART CITY vision.

TECHNOLOGIES USED :
IFTTT, Blynk, Thingspeak, Arduino IDE.

APPLICATONS AND USES:
This project is meant to save human effort and resources which includes time and fuel. This design implementation can be done in building Smart City Network using IoT.

FUNCTIONAL BLOCK DIAGRAM :

COURSES USED:
Internet of Things (IOT)



WEARABLE GADGET FOR THE BLIND

PROJECT ID: 2451-17-733-157.158.171
GUIDE: K. V SRILAKSHMI ASHARANI, ASST.PROFESSOR
DEPARTMENT: Computer Science And Engineering

ABSTRACT:
The visually impaired people use light weight foldable stick (Generally known as White cane) while walking to know the obstacles in their walking path. The white cane generally tells either small or big obstacles based on the movement of the white cane. Using microcontrollers and distance detectors, we are developing a gadget which can help visually impaired people to walk without any third hand support. The distance detectors detect the distance and transmit data to microcontroller which sends the caution signal to the buzzer or a vibrating motor based on how far the solid object is from the sensor.

TECHNOLOGIES USED:

Hardware: Arduino Pro mini, Ultrasonic Sensor, Buzzer, Vibration motor
Software: Arduino IDE, C++ Programming.

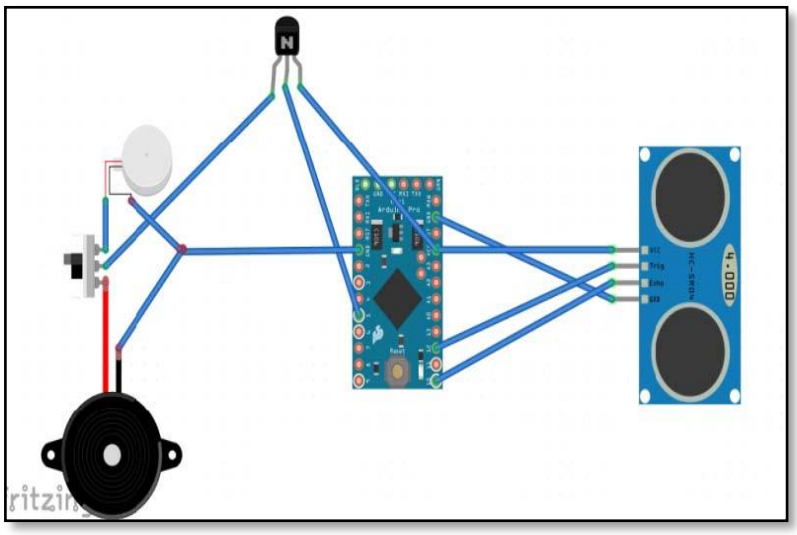
FUNCTIONAL BLOCK DIAGRAM :

APPLICATION AND USES:

- ✓ By wearing this device they can fully avoid the use of white cane and such other devices.
- ✓ This device will help the blind to navigate without holding a stick
- ✓ They can simply wear it as a band or cloth and it can function very accurately and they only need very little training to use it.
- ✓ This technology can also be scaled for collision avoidance in vehicles

COURSES USED/APPLIED:

Microcontroller, Embedded Systems.



VOICE CONTROLLED ROBOT

PROJECT ID: 2451-17-733-132.133.146
GUIDE: Mr. G. Vijay Kumar
DEPARTMENT: Computer Science Engineering

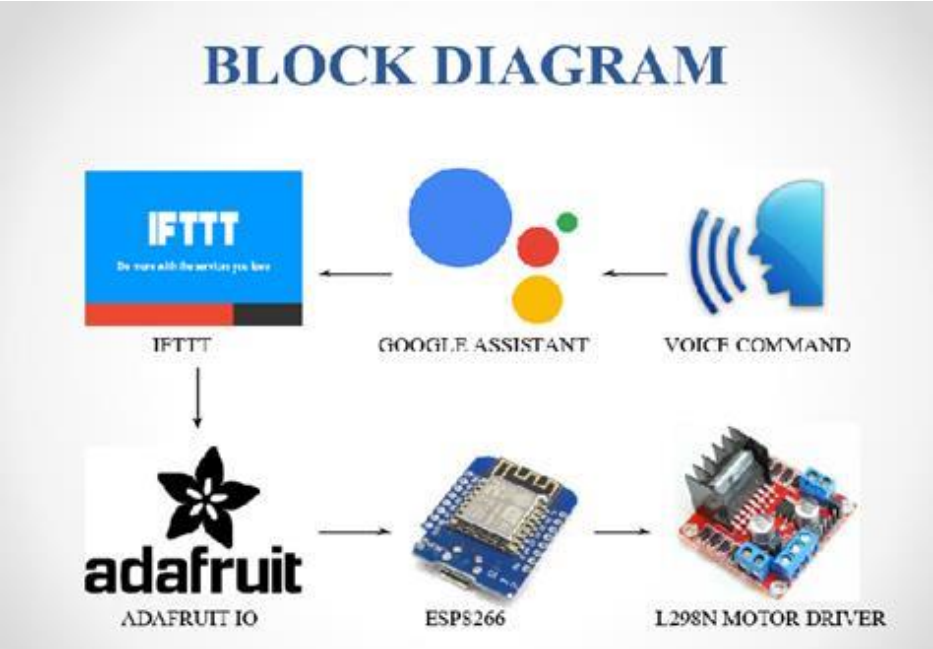
ABSTRACT:
A robot is usually an electro mechanical machine that is guided by computer and electronic programming. The purpose of robotics in commercial and residential intentions is becoming essential to make the challenging tasks simpler. Our project is one of the applications on vehicles. We aim to achieve human robotic interaction It is a prototype of a robotic vehicle which moves as per the voice instructions given by the user. The commands are given through the Google Assistant app. They are then sent to Adafruit.io fed using IFTTT (if +this then +that) platform. Adafruit.io is connected to Arduino IDE where entire coding takes place. The open loop microcontroller ESP8266 takes the feed and moves the vehicle accordingly.

TECHNOLOGIES USED:
Hardware: ESP8266, L298N Motor Driver
Software: Adafruit.io, IFTTT, Google Assistant app.

APPLICATIONS AND USE:
Our proposed model will be useful for applications such as speech controlled vehicle. It can be used for indoor assistance for household works and especially for people with disabilities. This also contributes a major part in industrial applications such as work robots. Security has been a major issue these days. This project can be useful in surveillance. The robot is useful in places where humans find difficult to reach but human voice can reach e.g. in fire situations

COURSES USED / APPLIED:
Microprcessor and Microcontroller, Arduino coding

FUNCTIONAL BLOCK DIAGRAM :



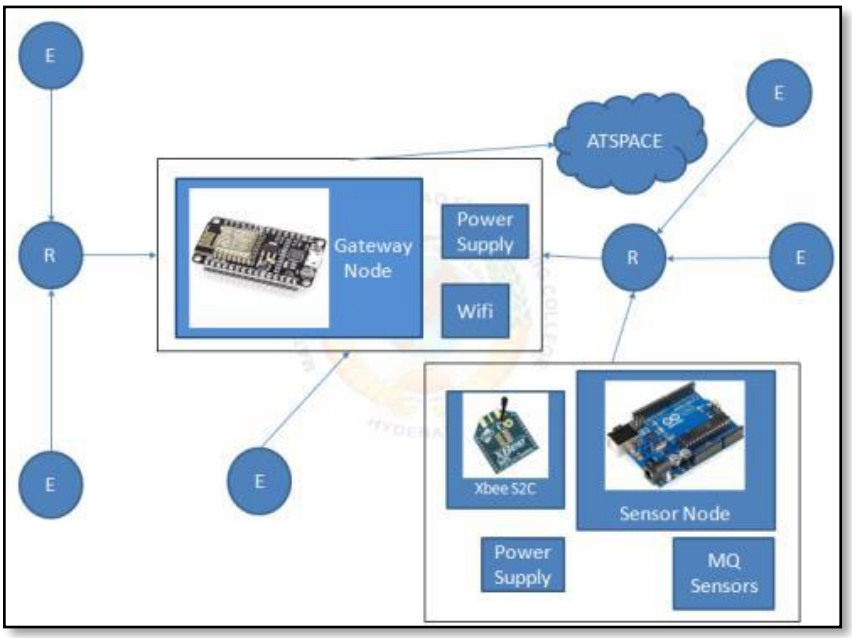
AIR QUALITY MONITROING SYSTEM USING IOT

PROJECT ID: 2451-17-733-131.141.145
GUIDE: Mr.G. Vijay Kumar
DEPARTMENT: Computer Science And Engineering

ABSTRACT:
Air pollution in India is a serious issue with the major sources being fuel wood and bio mass burning, fuel adulteration, vehicle emission and traffic congestion. The system that we are designing is to detect the harmful air pollutants and alert the public belonging to the areas. The system is going to be cost effective and the finished product can work anywhere using renewable energy sources to produce the desired output that can be freely accessible to the public. The system consists of several distributed monitoring sensor nodes that communicate wirelessly with a back-end server using machine-to-machine communication. Each sensor node is equipped with gaseous and meteorological sensors as well as data logging and wireless communication capabilities. The back-end server collects real time data from the sensor nodes and converts it into information delivered to users through web portals and mobile applications.

TECHNOLOGIES USED:
Embedded system technologies.Back End(Server side-php, myDatabase-sql) Front End of Website(HTML, CSS, JAVASCRIPT)

APPLICATIONS:
Air Pollution Monitoring, Home monitoring and control, Building monitoring and control, Industrial monitoring and control
COURSES USED/APPLIED:
Arduino IDE for NODES.,Wireless Sensor(s) Network.



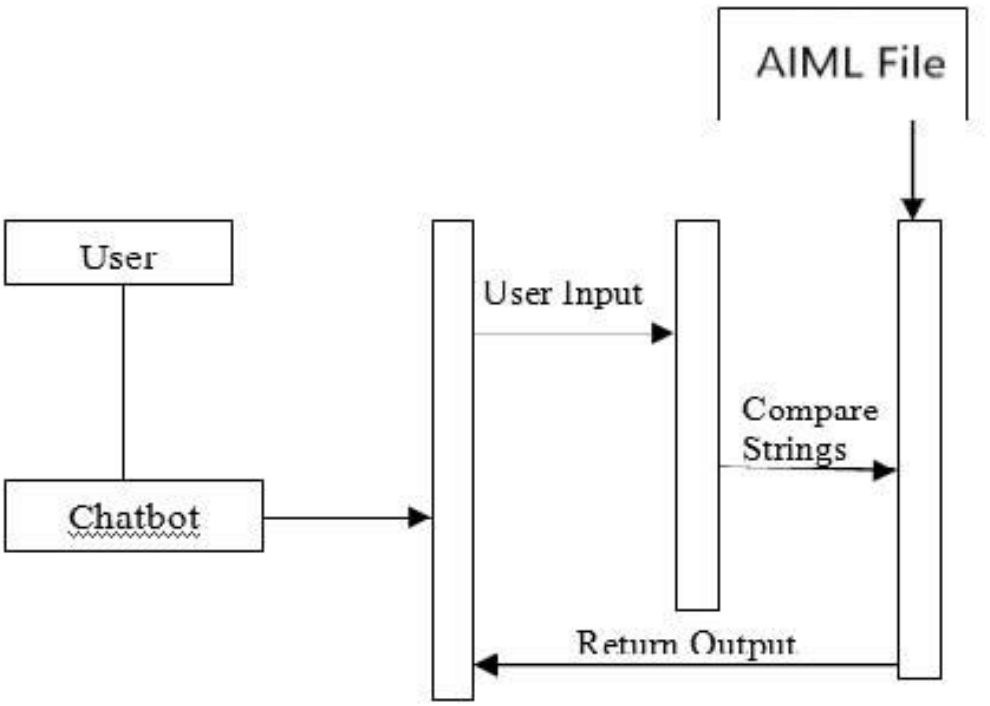
STUDENT ASSISTANT

PROJECT ID: 2451-17-733-114.119
GUIDE: Md.AbdulAzeem (Associate Professor)
DEPARTMENT: Computer Science And Engineering

ABSTRACT:
Chatbots present a new way for individuals to interact with computer systems. Traditionally, to get a question answered by a software program involved using a search engine, or filling out a form. A chatbot allows a user to simply ask questions in the same manner that they would address a human. The most well-known chatbots currently are: Alexa and Siri. In our project, we used graphic user interface and natural language processing to develop our chatbot. We have used a graphical user interface to design the outline of chatbot and to link the packages required for the project. Python is used for packages which are required for the project and to train our chatbot. To access time table we have to open our college website and then log in which takes a lot of time. In order to make this easier we are designing chatbot. It interacts with the individual regarding the information related to our college timetable. It gives information about the events, working days and holidays. The student can get information easily and quickly.

APPLICATION:
The chatbot can be applicable in colleges for better communication with students in this modern era.

COURSES USED/APPLIED: AIML, Python, tkinter library.

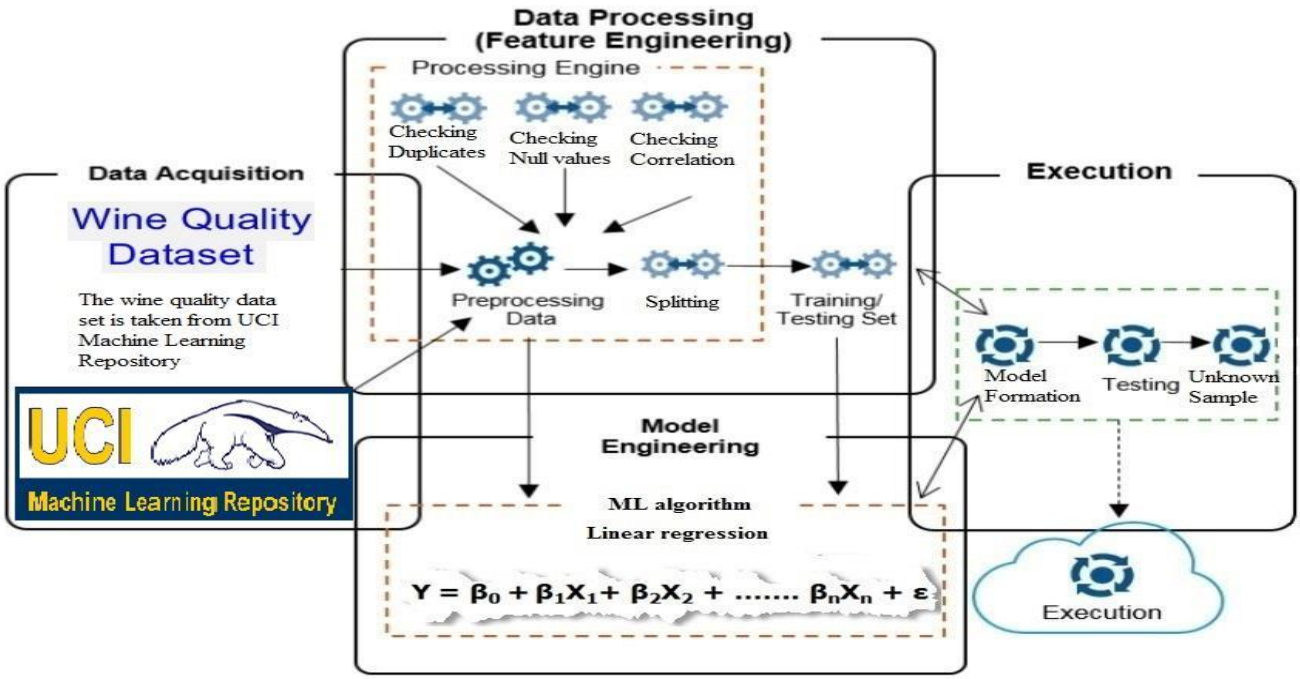


PREDICTION OF WINE QUALITY USING MACHINE LEARNING IN PYTHON

PROJECT ID : 2451-17-733-065.064.067
GUIDE : D.Haritha
DEPARTMENT: Computer Science And Engineering

ABSTRACT :
Prediction of wine quality refers to predicting the quality of wine based on the attributes given like fixed acidity, chlorides, density, ph etc. The wine quality dataset we are using is taken from UCI Machine Learning Repository. First, we preprocess the dataset, check for any missing values, duplicates and correlation between attributes. Next, we split the dataset into train and test dataset. Now, we imported a machine learning algorithm from sklearn called linear Regression for our project. Later, we train our algorithm with train dataset which gives a model. Then, we will test its accuracy using test dataset. Now, when an unknown sample with its attributes is given as input to the model, it predicts the quality of that sample.

TECHNOLOGIES USED : Spyder(Anaconda IDE)
FUNCTIONAL BLOCK DIAGRAM :



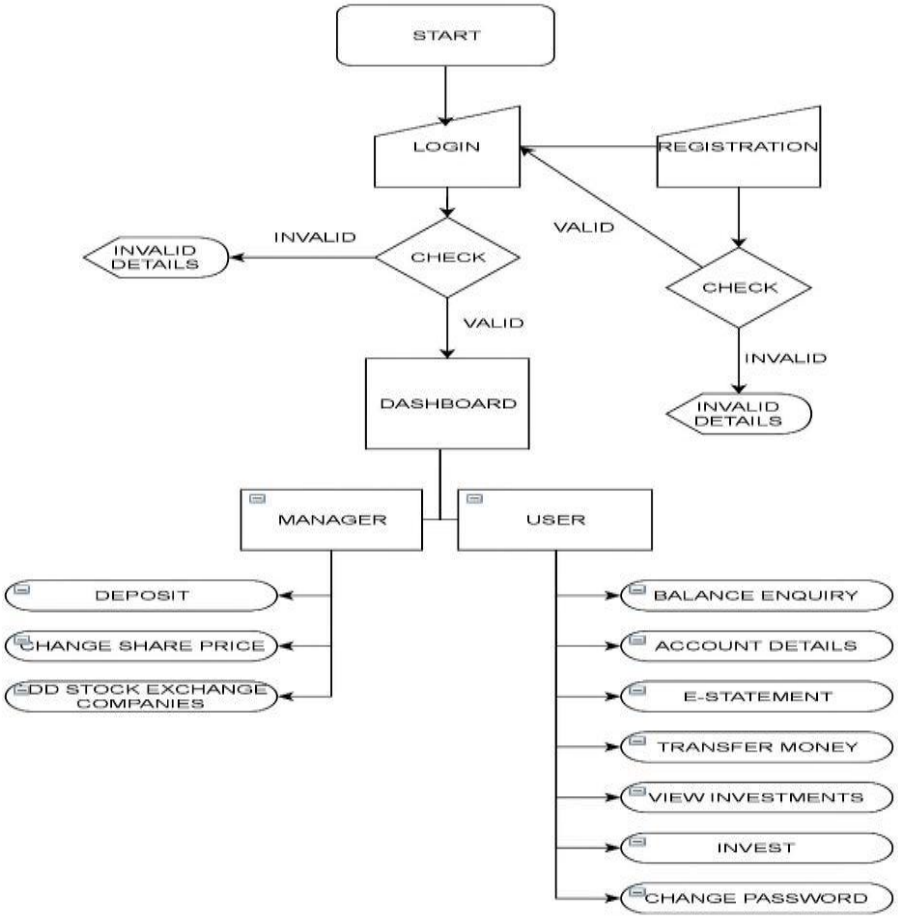
COURSES USED/APPLIED : Machine Learning, Python

BANKING SYSTEM

PROJECT ID: 2451-17-733-061.069
GUIDE: B. Venkataramana (Asst. Prof.)
DEPARTMENT: Computer Science and Engineering

ABSTRACT:
This project aims at creation of a Banking system using Python programming. This will be accessible to all customers who have a valid User ID and Password.In this project we are going to deal the existing facts in the bank i.e. the transactions which take place between customer and bank and transactions from customer to customer. This application eases the task of banking for customers to transfer money and avail other banking services in just few clicks. It also increases the efficiency of bank and can handle more customers. We provide an offline system for the data of the users.

APPLICATION:
Areas without internet connection for Local Banks
COURSES USED/APPLIED: File Management using Python



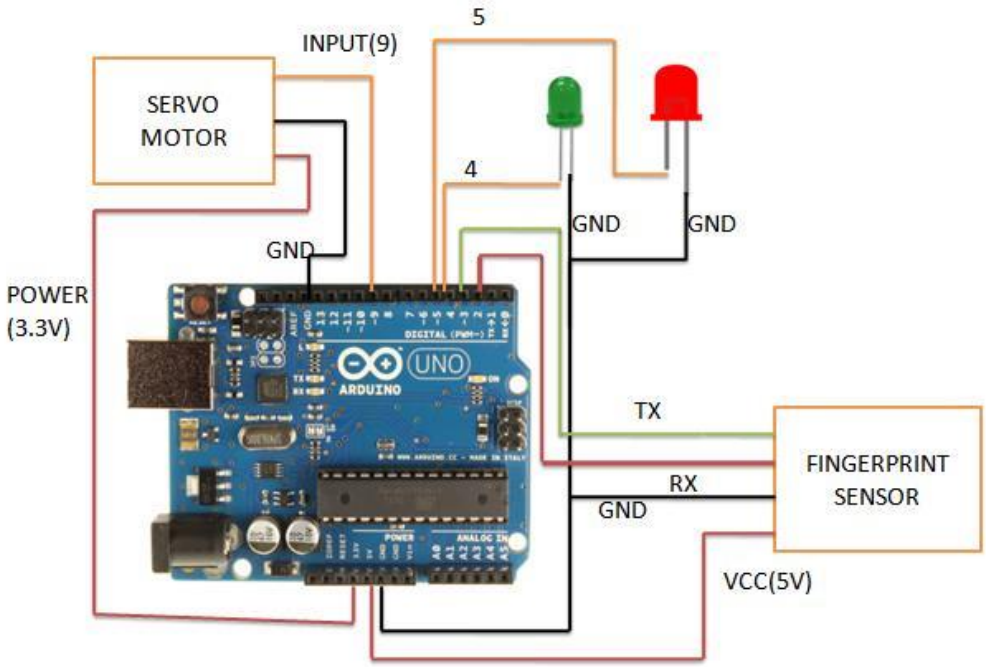
FINGERPRINT BASED SECURITY SYSTEM

PROJECT ID'S : 2451-16-733-007.008. 057
GUIDE : P.Shalini
DEPARTMENT : Computer Science and Engineering

ABSTRACT:
Authentication plays an important role in today's security systems. Apart from the number of methods available, fingerprint sensing is the most secure and convenient tool as it cannot be forgotten or stolen. Biometrics-based security, such as fingerprint authentication, is proven to be both more secure and convenient than passwords, making fingerprint sensing an increasingly common and product differentiating. Our project aims at designing and programming a fingerprint-based security system that allows us to store, detect and verify fingerprint in just one touch. The possible outcome will be opening a door with the access of the users. By this a user can access and open a door with the help of his fingerprint and the access is denied if the fingerprint does not match.

TECHNOLOGIES USED:
Biometric technologies.Embedded system technologies.

APPLICATIONS:
This project is designed mainly to provide security to bank lockers, jewellery lockers, confidential documents, offices, weapons, car doors etc.
These use the fingerprint technology to allow access to only that fingerprint you choose.
COURSES USED/APPLIED: Arduino ide.



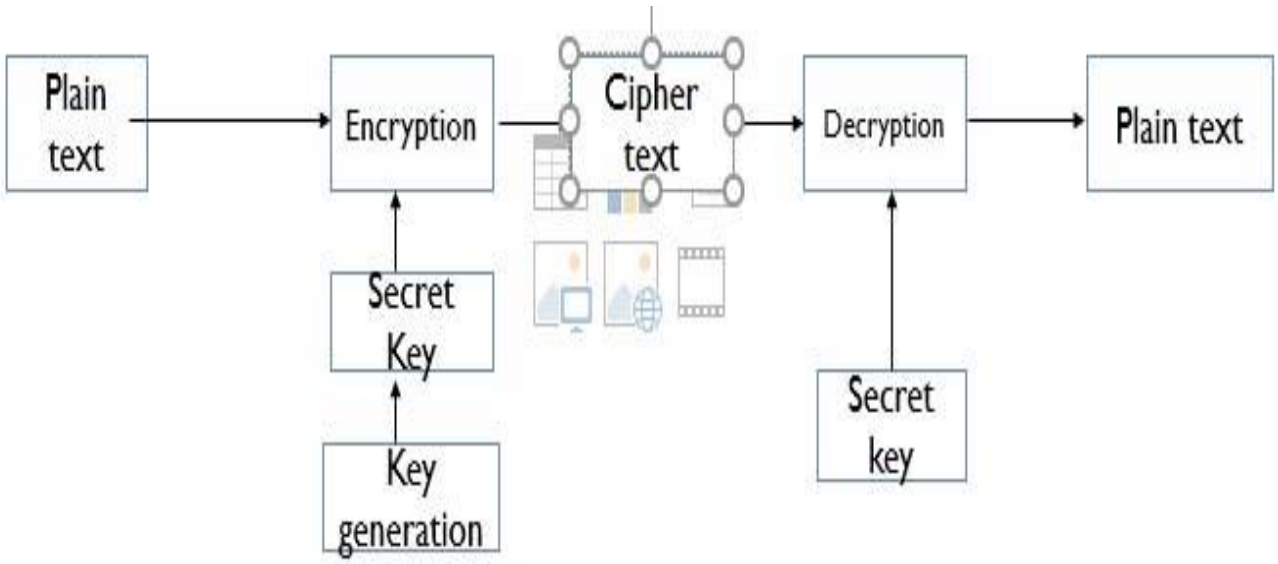
INSTANT MESSAGING SECURITY

PROJECT ID : 2451-16-733-086.070.071
GUIDE : Dr. H. Jayashree
DEPARTMENT : Computer Science and Engineering

ABSTRACT :
A Symmetric Cryptography algorithm was developed that can be used in the data security, which overcomes many defects of one of the mostly used RSA algorithm. The algorithm we have developed has three phases: 1) Key generation 2) Encryption of plain text to generate cipher text 3)Decryption to get plain text back from cipher text. We have used random matrix in key generation in the algorithm because same inputs, which we have taken as roll number and aadhar number, generate different cipher text, so that the algorithm cannot be traced back to find the plain text. The algorithm was developed such that cipher text cannot be traced back to obtain plain text and hence provides improved security.

TECHNOLOGIES USED : Python

APPLICATION : Can be used in securityfor transfer of messages ,can be used in messaging apps and data sharing apps
COURSES USED/APPLIED : Data Security, Python.



MIXED REALITY

PROJECT ID : 2451-16-733-103.082.076
GUIDE: Internship project
DEPARTMENT: Computer Science and Engineering

ABSTRACT :
Mixed Reality is sometimes referred as hybrid reality .It is merging of reality and virtual world to produce new environments and visualization where physical and digital objects co-exists and interact in real time. Mixed Reality takes place not only in the physical world or the virtual world,but it is mix of reality and virtual reality, encompassing both augmented reality and augmented virtuality via immersive technology

TECHNOLOGIES USED: Unity Technology, Vuforia, Machine Learning, Java Development Kit, Microsoft Visual Studio

APPLICATION: Security purpose, Teaching

COURSES USED/APPLIED: C#**,** Java

IMPORTANCE OF FEATURE SELECTION ON DEEP CNN FEATURES USED FOR IMAGE CLASSIFICATION

PROJECT ID: 2451-17-733-013.015.017
GUIDE: B.VENKATRAMANA, ASST.PROFESSOR
DEPARTMENT: COMPUTER SCIENCE AND ENGINEERING

ABSTRACT:
Feature Extraction forms the core of vision based applications such as image classification, recognition, retrieval etc. Due to success of deep learning in several domains, feature learning has gained importance as compared to conventional image feature extraction. It has been observed that activation values extracted from pre trained convolution neural nets such as AlexNet, VGGNet give efficient results as compared to generic feature extractors in matching, retrieval etc. However features obtained from fully connected layers of such deep nets are of considerable size as compared to conventional features of an image. Hence, it is important to select the best features which can represent the image distinctly without reducing the efficiency of operation being performed. In this paper we have experimented with features extracted from fully connected layers of VGG16 for classification of images. We have experimentally shown that feature selection when applied on fc1 or fc2 features greatly reduces time to build a classification model without affecting accuracy across all kinds of classifiers.

TECHNOLOGIES USED

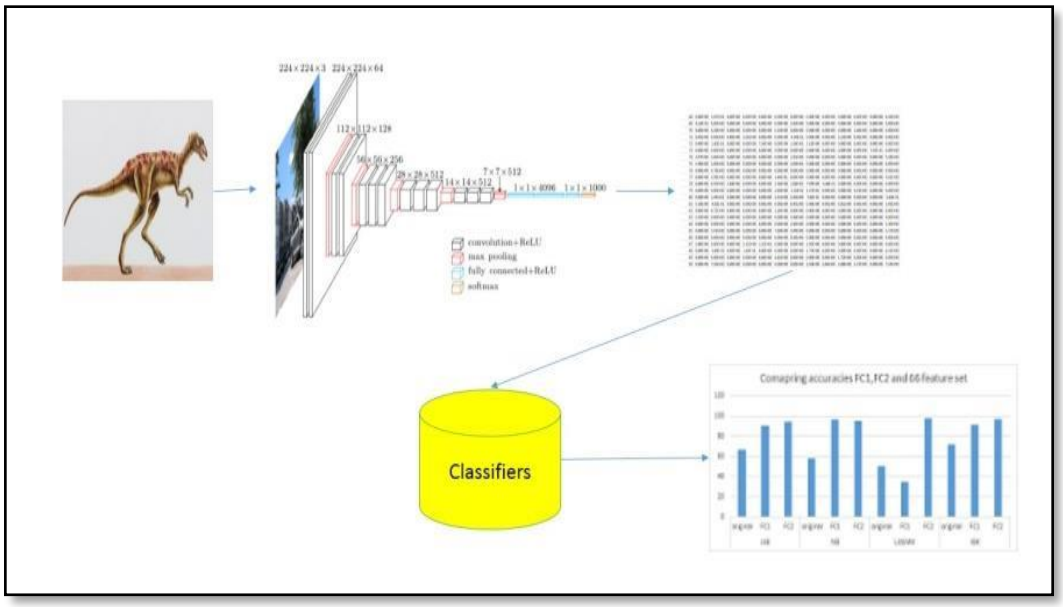
Software: Tensor flow, Python, Anaconda

APPLICATIONS:

- Remote sensing: Used in classifying raw satellite image of land area, taken from space into useful segregators based on geography.
- Infrared Thermal Imagery: A thermal camera captures heat signatures and classifies image of an object or area based on differences in temperature.

COURSES USED/APPLIED:

Deep learning, Python



SECURITY CAMERA NOTIFIER

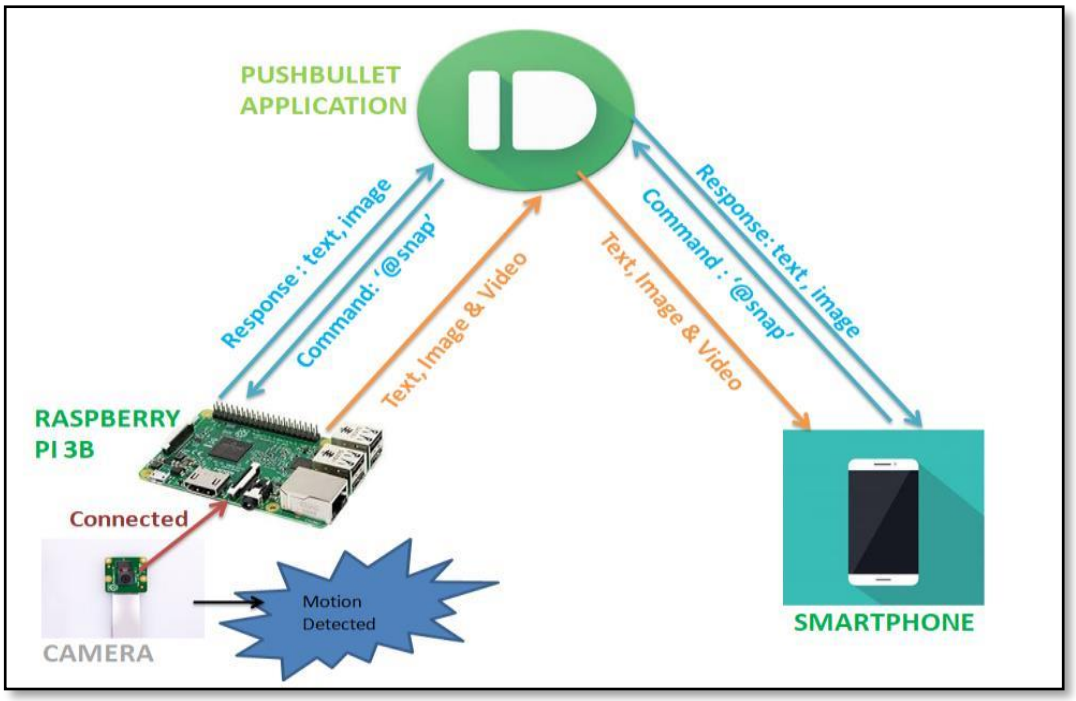
PROJECT ID: 2451-15-733-066.116.119
GUIDE: K.Murali Krishna, Assistant Professor, CSE Dept.
DEPARTMENT: Computer Science and Engineering

ABSTRACT:
Security Camera Notifier helps us to detect any motion happening in our personal room in our absence. This protocol works when a hidden camera placed in our room detects any motion in our absence. We will get a notification on our Smartphone (using the pushbullet app) the moment camera detects any kind of motion. Here, we would be provided with an additional command: @snap. If we reply with '@snap' the picamera will capture a picture of the motion detection and send it to us on our Smartphone. So, by this process of two-way communication we may ensure the security of room in our absence.

TECHNOLIGIES USED:
Hardware: Raspberry Pi 3B, Raspberry Pi Camera Module V2, SanDisk Micro SD Card 8GB
Software: Raspbian OS, Python language, Pushbullet App

APPLICATIONS: The aim of the project is to monitor the place by our smartphone. The system detects the motion and alerts the user with an image and video so that he/she may take appropriate measures against the activity.

COURSES USED/APPLIED: Python programming with raspberry pi



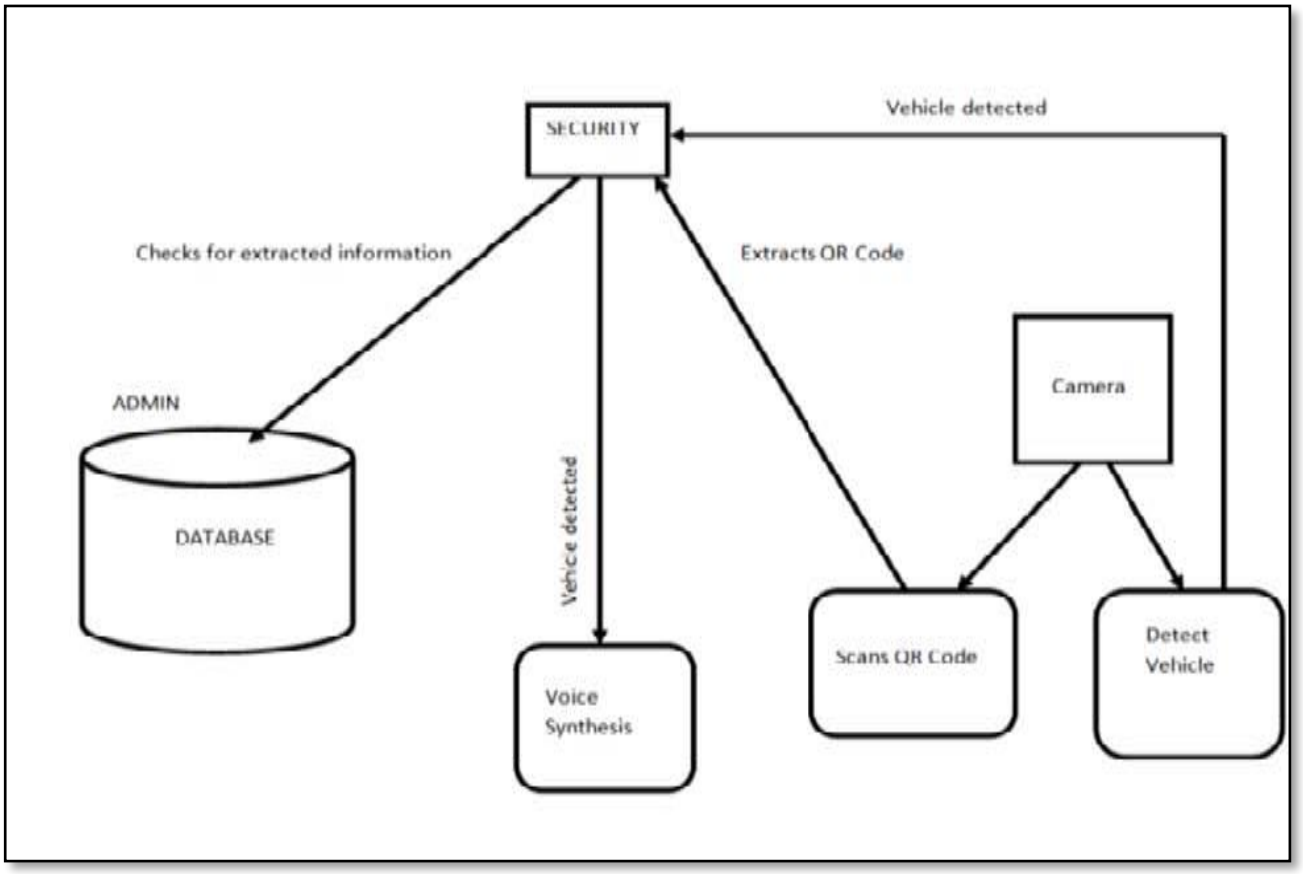
DETECT,VISION & SPEECH SYSTEM(DVS SYSTEM)

PROJECT ID : 2451-15-733-079. 080
GUIDE: Dr.H.Jayasree
DEPARTMENT : Computer Science and Engineering

ABSTRACT :
DVS system is an automated version of existing Material Gate Pass system. The purpose of this system is to detect a vehicle, generate and scan QR-code on vehicle and produce relevant voice synthesized instructions. The vehicle loaded with material is detected. It consists of a pertinent QR-code that is generated and further scanned under authorized conditions. Here, Admin phase generates a particular format of QR-code inclusive of materials present in a vehicle and checks for the message or details provided by security and maintains the database by clearing unnecessary data. Security phase- detects the vehicle, scans the QR-code and sends appropriate message to admin.

TECHNOLOGIES USED : Tensor Flow,QR generation,QR Scanning,PYTTS

APPLICATION : Criminal Detection, Burglar Detection, Material Gatepass (BDL)
COURSES USED/APPLIED : Python,openCV



HEART DISEASE ESTIMATION

PROJECT ID : 2451-15-733-100, 2451-15-733-101, 2451-15-733-102
GUIDE : Dr. H. Jayasree, Associate Professor
DEPARTMENT : Computer Science Engineering

ABSTRACT :
The healthcare industry collects huge amounts of health care data which, unfortunately, are not mined and analyzed in a proper manner to discover hidden information, to take decisions effectively, to discover the relations that connect patterns. The aim is to develop a decision support in Heart Disease Prediction System (HDPS) using machine learning's naive bayes algorithm. Using medical profile of the patient (age, gender, blood pressure, blood sugar, cholesterol, chest pain, ECG graph etc.), it can predict the likelihood of patient getting a heart disease. The likelihood (class label) may be of 5 stages: no, low, medium, high and very high. If an unknown sample comes, then the system will predict the class label of the sample. Hence two basic functions namely classification and prediction will be performed. Initially binary classification is performed to find whether there is a likelihood of disease. If yes, then multiclass classification is used to classify the disease among the remaining four stages. It is implemented in python as an application which takes medical test's parameter as an input. It can be used as a training tool to train nurses and medical students to diagnose patients with heart disease.

TECHNOLOGIES USED : Software: Python (Spyder Environment)

APPLICATIONS :
This is an automated heart disease estimator which would predict the value of how probable a patient is likely to get a heart disease. It can be used by any medical practitioner. This would save time and manual effort in the estimation process.

COURSES USED/APPLIED : Data Analysis, Machine Learning.

ANALYTICS OF AIR POLLUTION

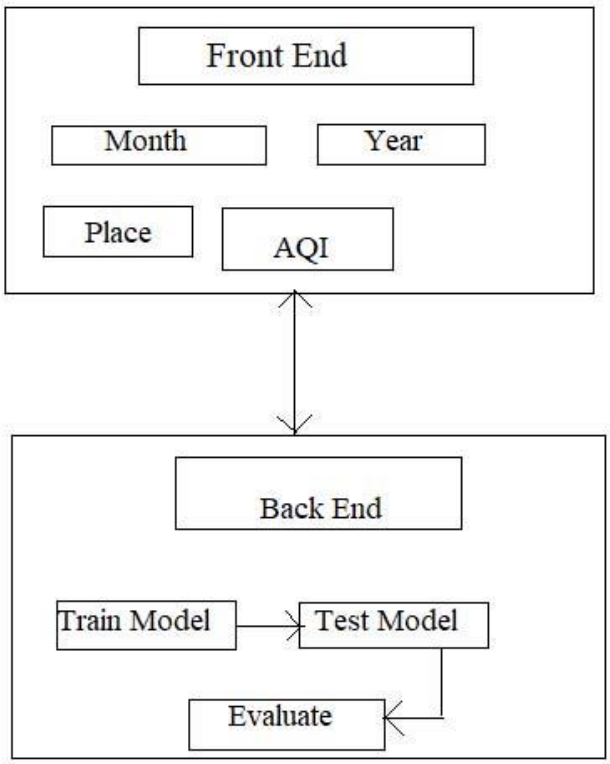
PROJECT ID : 2451-15-733-121.134.154
GUIDE : Dr. A.V.Krishna Prasad
DEPARTMENT : Computer Science and Engineering

ABATRACT :
Over the past years the development and urbanization in India has led to increase in air pollution. The high growth rate of cities induces imbalances in weather patterns, with negative consequences to public health. This has led to study and research in this area. We have seen the trends of various air pollutants like sulphur dioxide (SO2), nitrogen dioxide (NO2), particulate matter (PM10). We apply analytical techniques to analyze the existing trends in air pollution in India and forecast the year wise progress in coming years about the future. In addition to this, mitigation strategies will be provided.

TECHNOLOGIES USED :
Software: Anaconda

APPLICATION :
This project can be used to analyze the air quality and predict the level in future and try to control the growth of pollution levels by some mitigation strategies provided which are based on the predicted values.

COURSES USED/APPLIED : Machine Learning, Web technologies.



GESTURE RECOGNITION

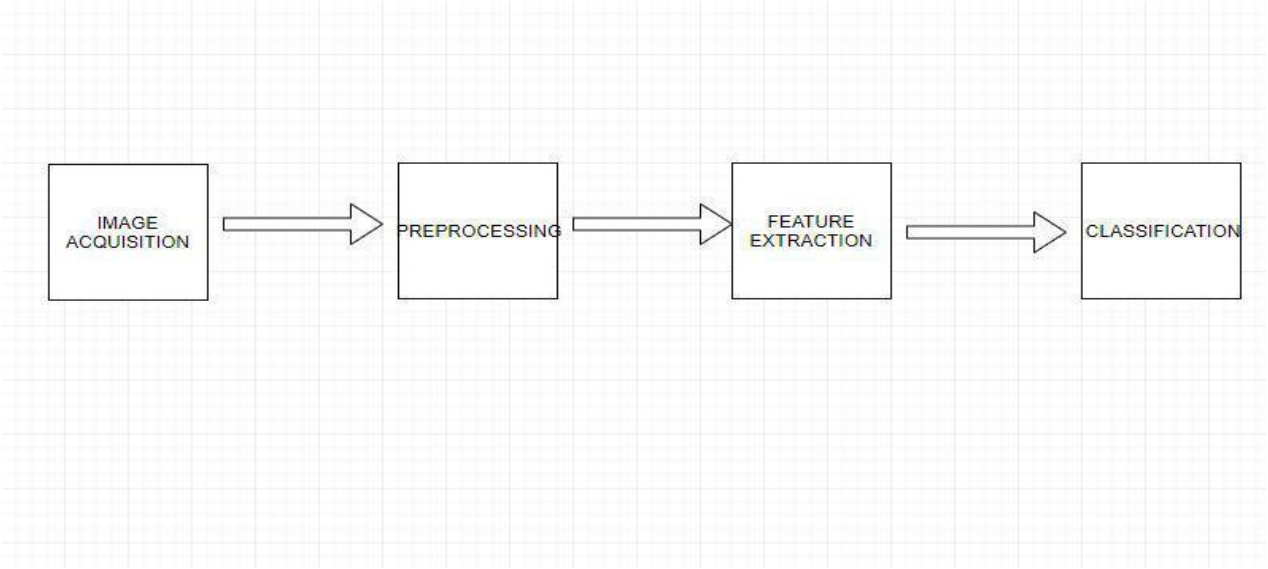
PROJECT ID : 2451-15-733-083.103.113
GUIDE: S. Amulya
DEPARTMENT: Computer Science and Engineering

ABSTRACT :

The proposed application can ease the use of many applications giving the user the ability to control them from any place in the room wirelessly. It is suitable for implementing advanced interaction techniques. Furthermore, the proposed application is a convenient substitution for the costly wired joysticks.

TECHNOLOGIES USED: Arduino Uno, Accelerometer, Gyroscope

FUNCTIONAL BLOCK DIAGRAM:



APPLICATION:

Gesture Recognition is used to convert accelerometer and gyroscope data to characters or sketch. A Bluetooth is used to send gesture performed to the PC. This data is used to classify a character or sketch. When user presses the button, the module starts to send accelerometer data to the PC and the button is released to stop the transmission.

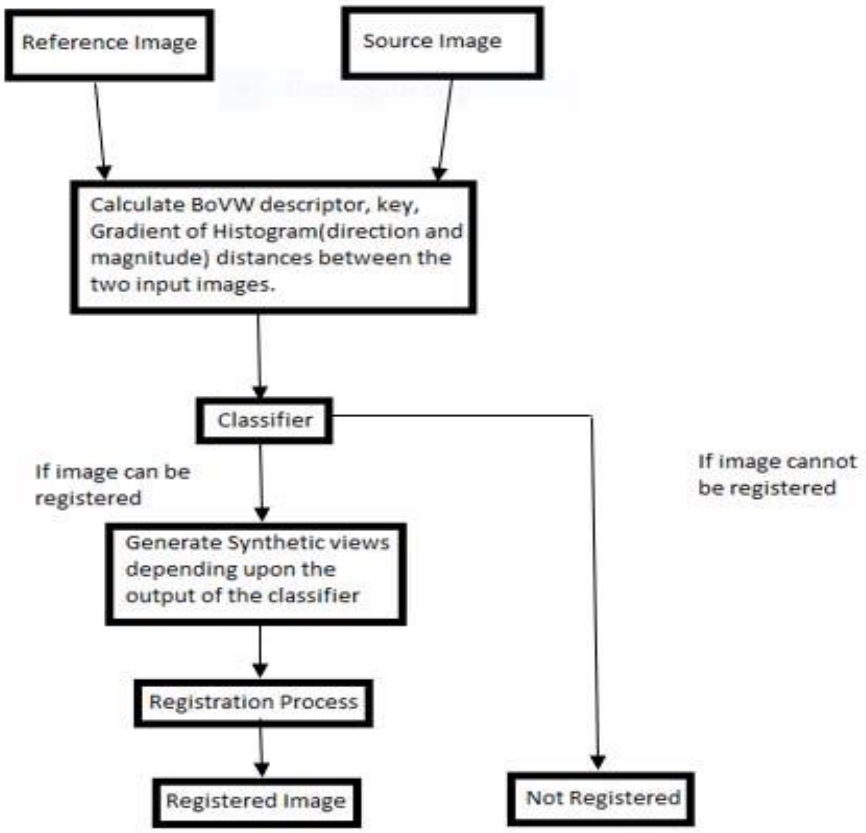
CLASSIFICATION OF DEFORMATION COMPLEXITY OF IMAGES FOR IMAGE REGISTRATION

PROJECT ID: 245115733040.047.058
GUIDE: D.Sirisha, Assistant Professor
DEPARTMENT: Computer Science and Engineering

ABSTRACT:
Image registration is a pre-processing step for different applications. It consists of mainly four steps: feature detection, feature matching, transformation model estimation and image resampling. View synthesis is incorporated in the standard pipeline of feature-based image registration, to feed the feature detector with additional synthetic views of an image. A predictive approach is proposed in which the number of synthetic views to be generated in order for the image to get registered is estimated based on their deformation complexity w.r.t one another, thereby eliminating the need to generate extra synthetic views as in the case of iterative approach which incurs cost of additional memory and time to be spent on generation of relatively more views and feature extraction across all those views.

TECHNOLOGIES USED: Microsoft Visual Studio 10, OpenCV 2.4.8 C++, Weka.
FUNCTIONAL BLOCK DIAGRAM:

APPLICATION: Image registration is a pre-processing step for different applications. It has been widely used in change detection, image fusion and other related areas.



GENERAL ELECTION USING BLOCKCHAIN

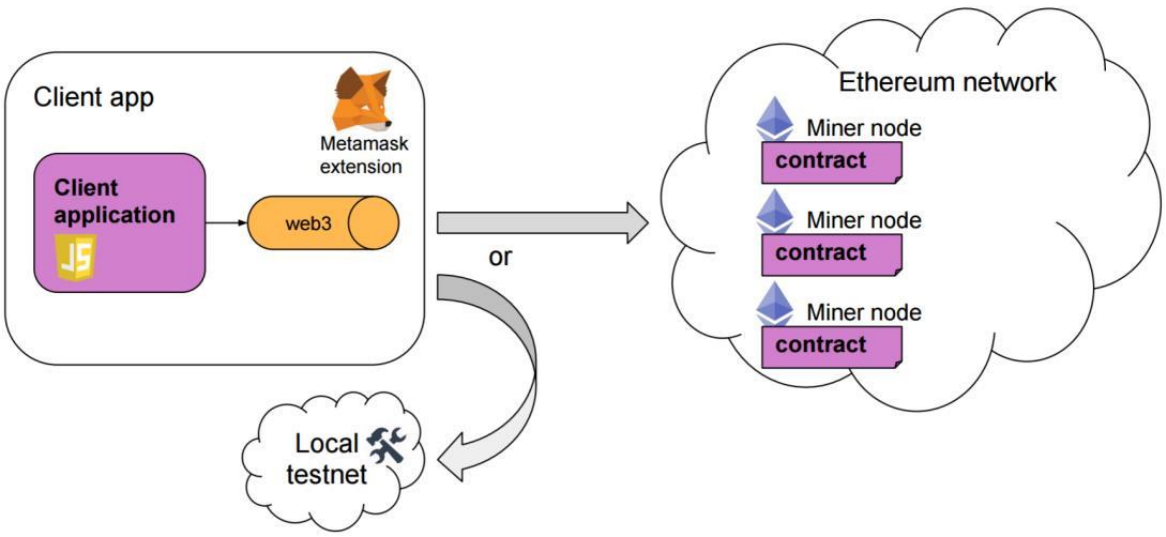
PROJECT ID: 2451-15-733-066. 116.119
GUIDE: K. MURALI KRISHNA, ASST. PROFESSOR

DEPARTMENT: Computer Science and Engineering

ABSTRACT:
The Election Application is held using a decentralized system. The Application is deployed on a local Blockchain Network or Ethereum Network. The local Blockchain is run on the host system with the help of Ganache. The Ganache Application provides 10 Ethereum accounts. The Metamask extension is added to browser which connects the Ethereum accounts to the front end so that the account can cast a vote. The results are updated on all the nodes in the network if a vote has been cast. This provides transparency. Once the votes are cast the results cannot be changed since the Ethereum blockchain is immutable.

TECHNOLOGIES USED:
Software: Ganache Application, Metamask Extension,Solidity & WEB3 Programming.

FUNCTIONAL BLOCK DIAGRAM :



APPLICATION AND USES:

- It overcomes the disadvantages of the traditional centralized system by providing security using Proof Of Work (PoW) algorithm.
- The data stored in the Smart Contracts are immutable which makes the Election more secured rather than using the database which can be hacked or modified.
- The Indian Election Commission can extend this application by integrating the voter id's to the Ethereum network to hold free and fair election.

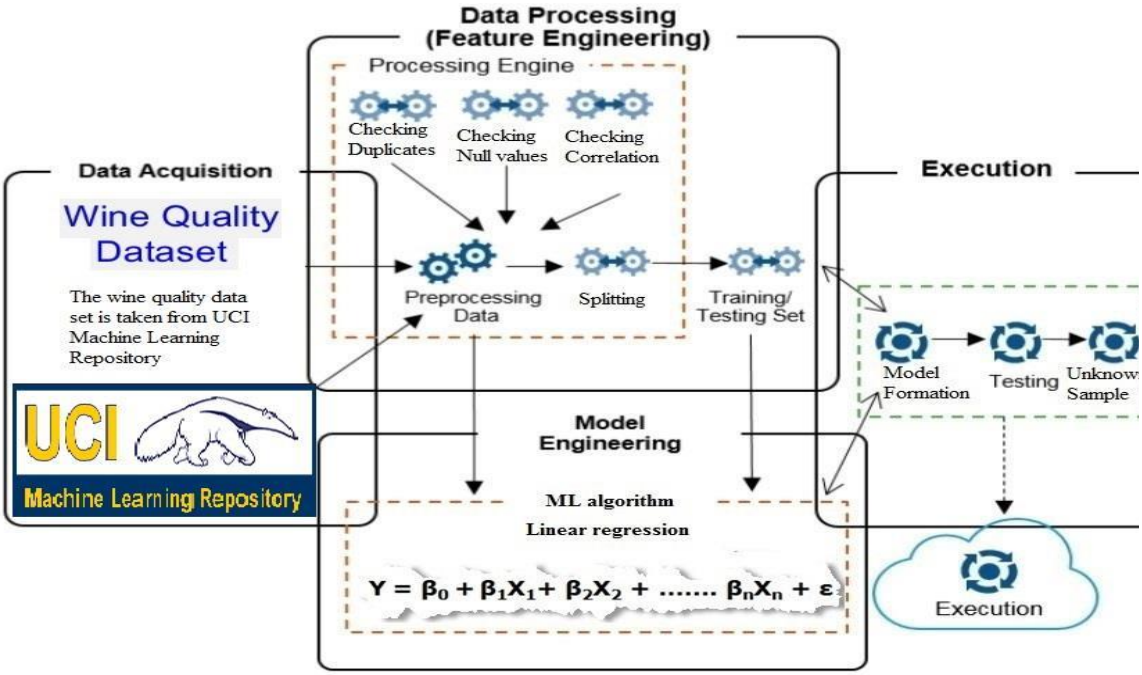
COURSES USED/APPLIED: web3.js, Smart Contracts development using Solidity language.

PREDICTION OF WINE QUALITY USING MACHINE LEARNING IN PYTHON

PROJECT ID : 2451-17-733-065.064.067
GUIDE : D.Haritha
DEPARTMENT : Computer Science and Engineering

ABSTRACT :
Prediction of wine quality refers to predicting the quality of wine based on the attributes given like fixed acidity, chlorides, density, ph etc. The wine quality dataset we are using is taken from UCI Machine Learning Repository. First, we preprocess the dataset, check for any missing values, duplicates and correlation between attributes. Next, we split the dataset into train and test dataset. Now, we imported a machine learning algorithm from sklearn called linear Regression for our project. Later, we train our algorithm with train dataset which gives a model. Then, we will test its accuracy using test dataset. Now, when an unknown sample with its attributes is given as input to the model, it predicts the quality of that sample.

TECHNOLOGIES USED : Spyder(Anaconda IDE)
FUNCTIONAL BLOCK DIAGRAM :



COURSES USED/APPLIED : Machine Learning, Python

SIAMESE PATCH BASED IMAGE MATCHING WITH CNN

PROJECT ID: 2451-17-742-001
GUIDE: Dr. B.Sandhya
DEPARTMENT: Computer Science And Engineering

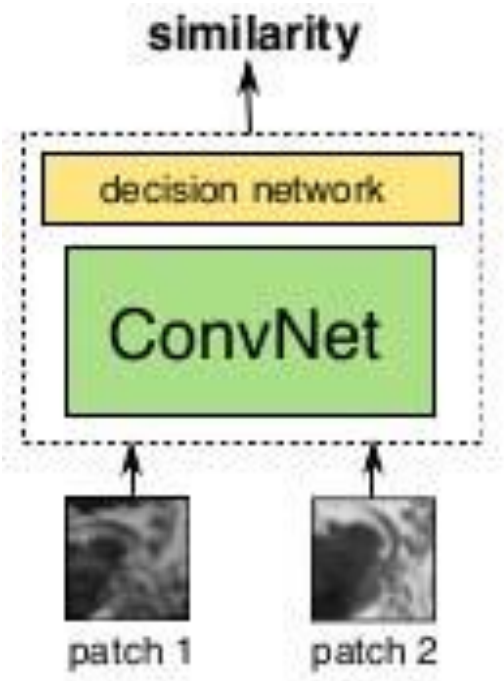
ABSTRACT:
In this project, a convolutional neural network is designed that can classify image patches by measuring their similarities. Similarities of images are measured from the feature maps that are extracted from raw images (patches). Deep Neural Networks are being used in feature map extraction, classification tasks. A model is developed that maps the patch to low-dimensional feature vector and similarity distance is calculated. Threshold is applied on the similarity distance resulting '1' for similar patches and '0' for dis-similar patches. Here cosine-similarity is used as similarity distance. Cosine-similarity is considered as one of the best similarity measure than L2 Norm (Euclidean distance) in evaluating hand-crafted descriptor such as SIFT. The results are collected by training the model with Hpatches dataset with promising results of matching and non-matching similarities.

TECHNOLOGIES USED:
Software: Python Libraries, Tensorflow, Keras

APPLICATIONS AND USES:
Image reconstruction, Image matching, face matching, etc. Highly used in recognition systems for rapid and robust detection, matching with transformed , illumination, photometric differences of the original image. This method can also be used in extended application areas like area-based, feature based image matching. In real world can be applied in matching of footage of people , in identification of suspects in criminal records. Can also be extended to mobile application of matching a patch whether the patch belongs to the image or not.

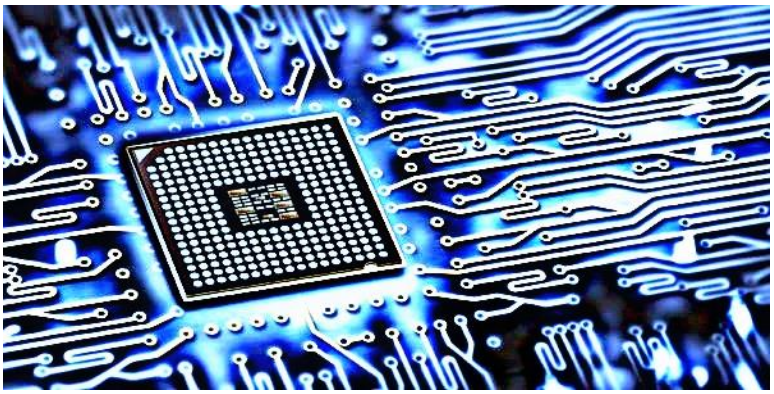
COURSES USED/APPLIED:
Machine Learning, Computer Vision

IMAGE OF THE PROJECT:



DEPARTMENT OF

ELECTRONICS AND COMMUNICATION ENGINEERING



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

VISION

To impart technical education of highest standards in Electronics and Communication Engineering producing technically competent engineers.

MISSION

- To impart adequate fundamental knowledge in Electronics and Communication Engineering.
- To maintain a creative balance of academic, professional and extracurricular programs.
- To create climate conducive to excellent teaching learning process with highest standard of engineering and technology.
- To nurture creativity in students with solid communication and team work skills.
- To contribute to advancements of Electronics and Communication Engineering and Technology with educational and collaborative efforts.
- To make positive contribution to meet social need and promote the value of ethical behavior.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- ✓ To prepare students with excellent comprehension of basic sciences, mathematics and engineering subjects facilitating them to gain employment or pursue postgraduate studies with an appreciation for lifelong learning.
- ✓ To train students with problem solving capabilities such as analysis and design with adequate practical skills wherein they demonstrate creativity and innovation that would enable them to develop state of the art equipment and technologies of multidisciplinary nature for societal development.
- ✓ To inculcate positive attitude, professional ethics, effective communication and interpersonal skills to succeed in chosen profession, as team member and as well as leader.

Department of
Electronics and Communication Engineering

PROJECT TITLES

S. No	Project title
1	Air Pollution Alert System
2	Automated Sun Tracking Solar Panel
3	Automation Banking Using Iot
4	Gesture Recognition Glove For Audio-Vocally Impaired Individuals
5	Haptic Feedback For Visually Impaired
6	Intruder And Fire Detection Using Computer-Vision And Iot
7	Missile Detection And Automatic Destroy System
8	Multi-Colour Line Follower With Obstacle Detection
9	Touch Screen And Zigbee Based Wireless Communication Assistant For

AIR POLLUTION ALERT SYSTEM

PROJECT ID: 2451-15-735-024.040.055
GUIDE: Mr. Sesidhar. VSR. Devalraju
DEPARTMENT: ELECTRONICS AND COMMUNICATION ENGINEERING

ABSTRACT:
Air pollution in India is a serious issue with the major sources being fuel wood and bio mass burning, fuel adulteration, vehicle emission and traffic congestion. The system that we are designing is to detect the air pollutants and alert the public belonging to the areas having dedicated hardware, of outdoor air quality. The system consists of several distributed monitoring sensor nodes that communicate wirelessly with a Gateway node using Zigbee communication. Each sensor node is equipped with solid state gas sensors as well as wireless communication capabilities. The back-end server collects real time data from the gateway node and converts it into information delivered to users through web portal.

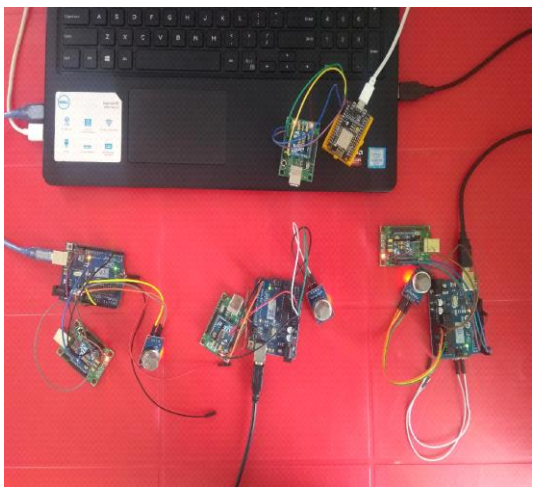
TECHNOLOGIES USED:
1. IoT
   - Wireless Sensor Networks
   - ZigBee
   - Wi-Fi

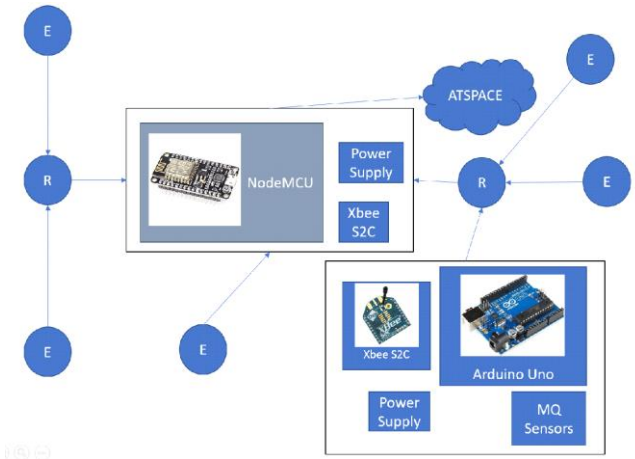
BLOCK DIAGRAM:

APPLICATIONS:
1. Pollution monitoring system.
   - Health monitoring.

COURSES APPLIED:
1. Data transfer from End device and Coordinator
   - Data transfer from Gateway to Database

IMAGE OF THE PROJECT:





AUTOMATED SUN TRACKING SOLAR PANEL

PROJECT ID: 2451-16-735-063.069.081
GUIDE: Mr V.SURESH KUMAR
DEPARTMENT: ELECTRONICS AND COMMUNICATION ENGINEERING

ABSTRACT:

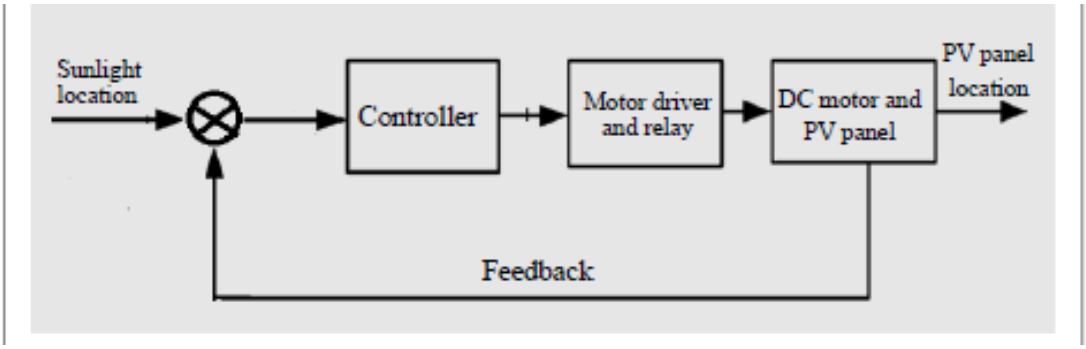
Sun Tracking System for Solar Panel project is made for tracking the sun in day time for utilizing its solar energy properly for solar panel. The Sun Tracking system is all weather, reliable and affordable device

This project orients the Solar Panel towards the sun, so that it can utilize with higher accuracy. Our Sun Tracking system tracks the sun by use of sensors and rotate the solar panel by means of stepper motor. The tracker minimizes the angle of incidence between the incoming light and a solar panel. This increases the amount of energy produced from a fixed amount of installed power generating capacity.

TECHNOLOGIES USED:

- Micro controller
- Stepper motor

FUNCTIONAL DIAGRAM:



APPLICATIONS:

- Energy stored can be utilized for house hold applications
- Can be used as a backup power supply in industries
- Used in street light control

COURSES APPLIED:

- Micro controllers and interfacing
- Rectifiers, Filters and Regulators
- Stepper motor

AUTOMATION BANKING USING IOT

PROJECT ID: 2451-12-735-179. 245*1*-15-735-146. 2451-16-735-331.

GUIDE : G. Sravan kumar

DEPARTMENT: Electronics and Communication Engineering.

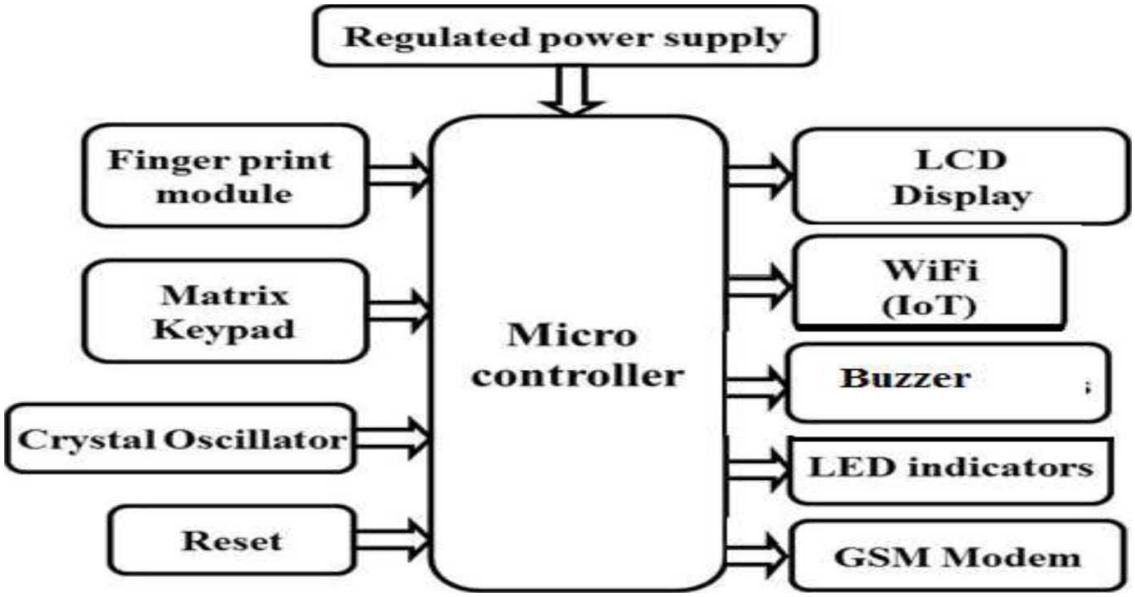
ABSTRACT:

This project aims at designing and developing biometric finger print Technology based money transaction system for shopping. As more global financial Activity becomes digitally-based; banks are utilizing new technologies to develop Next-generation identification controls to combat fraud make transactions more Secure, and enhance the customer experience.

TECHNOLOGY USED:

- Internet of Things (IOT).
- Biometric system.

FUNCTIONAL BLOCK DIAGRAM:



APPLICATIONS:

- Banking, shopping, anti theft transactions.

COURSES APPLIED:

- Biometrics, Microcontroller, WIFI module, IOT technology.

GESTURE RECOGNITION GLOVE FOR AUDIO-VOCALLY IMPAIRED INDIVIDUALS

PROJECT ID: 2451-18-744-005.006.011(ME)
GUIDE: Ms. B.Bhavani.
DEPARTMENT: ELECTRONICS AND COMMUNICATION ENGINEERING

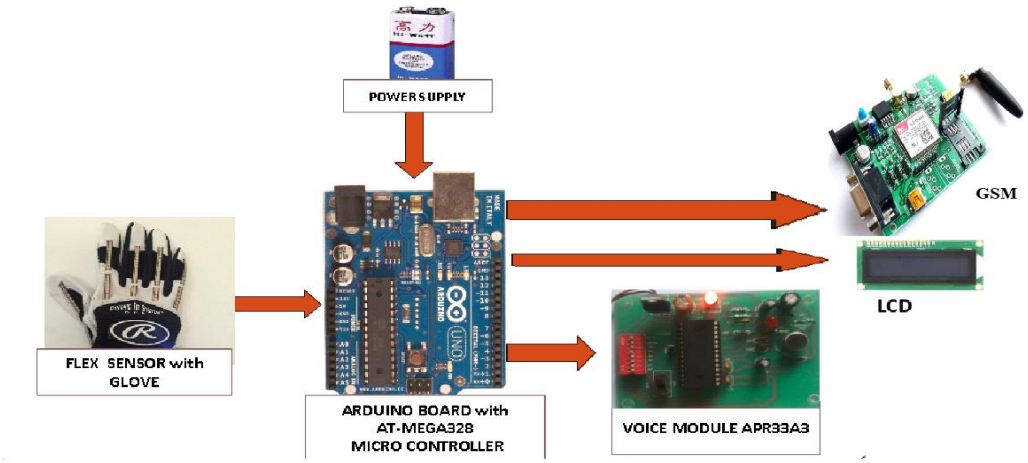
ABSTRACT:
The main aim of the project is to develop, Gesture recognition glove designed to facilitate an easy communication through synthesized speech, displayed that words on LCD and SMS send to phone for the benefit of audio-vocally impaired individuals.

The glove is internally equipped with multiple flex sensors that are made up of "bend-sensitive resistance elements". For each specific gesture, internal flex sensors produce a proportional change in resistance of various elements. The processing of this information sends a unique set of signals to the ARDUINO ATmega328 microcontroller then the desired words displayed it on LCD, voice module APR33A3 which is pre-programmed to speak that desired words and GSM which is used to send SMS to the phone.

TECHNOLOGIES USED:

- Voice module.
- Flex sensors**.**
- GSM module**.**

BLOCK DIAGRAM:



APPLICATIONS:

1. This project is a useful tool for audio-vocally impaired individual and partially paralysed patients which fill the communication gap between patients, doctors and relatives.
2. This project will give dumb a voice to speak & display that words on LCD for their needs and to express their gestures.

COURSES APPLIED:

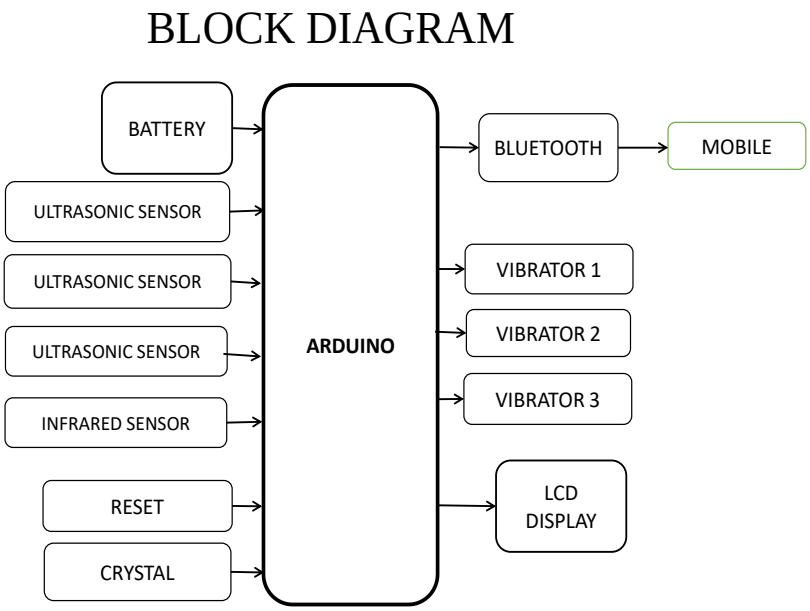
- Operation of Voice module
- Operation of GSM Wireless communication.

HAPTIC FEEDBACK FOR VISUALLY IMPAIRED

PROJECT ID: 2451-16-735-124.127.136
GUIDE : V. Suresh Kumar, (Assistant Professor, Department of ECE)
DEPARTMENT : Electronics and Communication

ABSTRACT :. This project presents a haptic belt to assist individuals who are visually impaired. Sounds and synthetic speech are typically utilised, but feedback through the sense of touch (haptics) is also used, often in the form of vibrations. Haptic feedback is appealing because it does not block or distort sounds from the environment that are important for non-visual navigation Ultrasonic sensors are used for obstacle detection and are used as transceivers. These sensors works on the principle similar to radar or sonar which detects the object with the help of echoes from sound waves. This proposed system uses ARDUINO based embedded system to process real timed at a collected using ultrasonic sensor network.

FUNCTIONAL BLOCK DIAGRAM :



TECHNOLOGY USED :

- Arduino
- Ultrasonic Sensors

APPLICATIONS:

- sense of touch is crucial for medical training
- For certain applications, for example where terrain or texture information needs to be conveyed.
- various haptic interfaces for medical simulation

COURSES APPLIED :

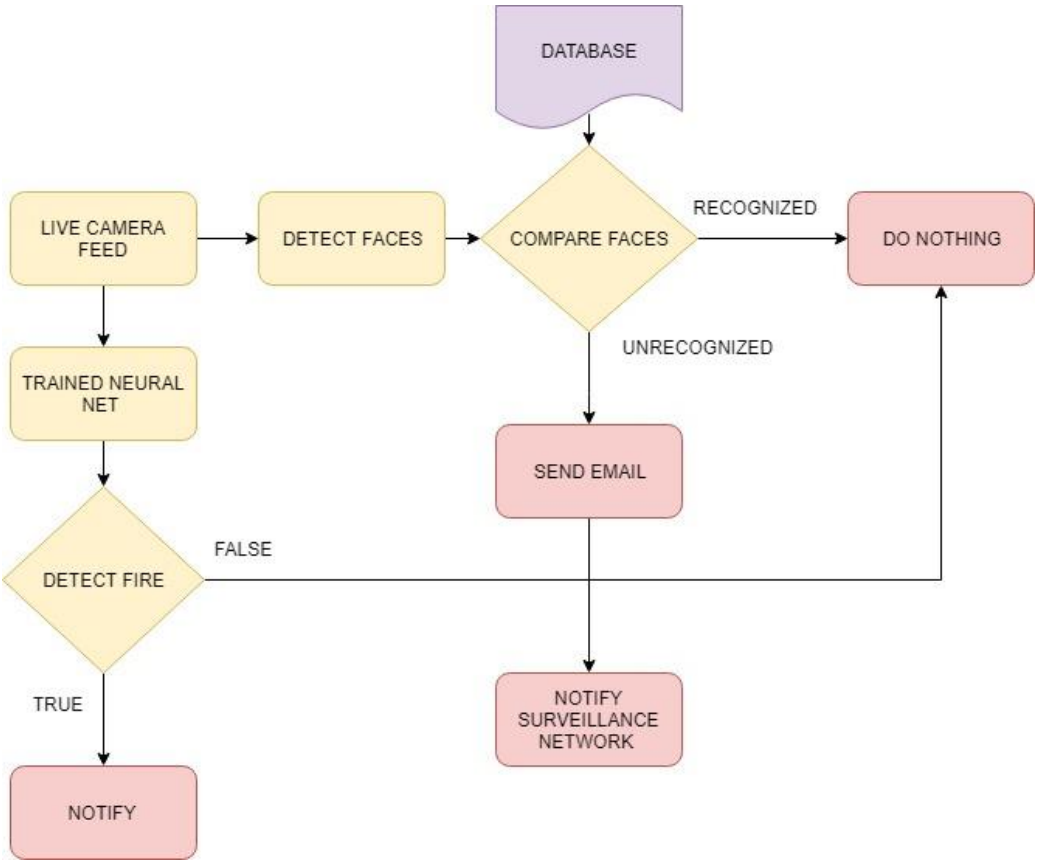
- Haptic technology
- Haptic Rendering

INTRUDER AND FIRE DETECTION USING COMPUTER- VISION AND IOT

PROJECT ID: 2451-15-735-036.2451-15-735-035.2451-15-735-009.
PROJECT GUIDE: T. Kavitha.

ABSTRACT: The main purpose of this project is to create a secure home monitoring system with intrusion and fire detection, the algorithm followed here is to create a database of authorized family members and to verify faces taken from surveillance camera if the faces detected are not in the pre-created database then the house owner is notified by sending the image of the intruder through email based on the intruder data the surveillance cameras in the neighborhood are updated to detect the intruder this whole process is done autonomously. For fire detection a mask is created to threshold RGB values of fire by applying this mask to live video feed we can detect fire in input frames also a neural net has been trained on fire images to detect fire.

- **FUNCTIONAL DIAGRAM:**



TECHNOLOGIES USED: Machine Learning, Image Processing, IOT.

APPLICATIONS: Autonomouswild fire detection ,Live intruder detection and tracking.

MISSILE DETECTION AND AUTOMATIC DESTROY SYSTEM

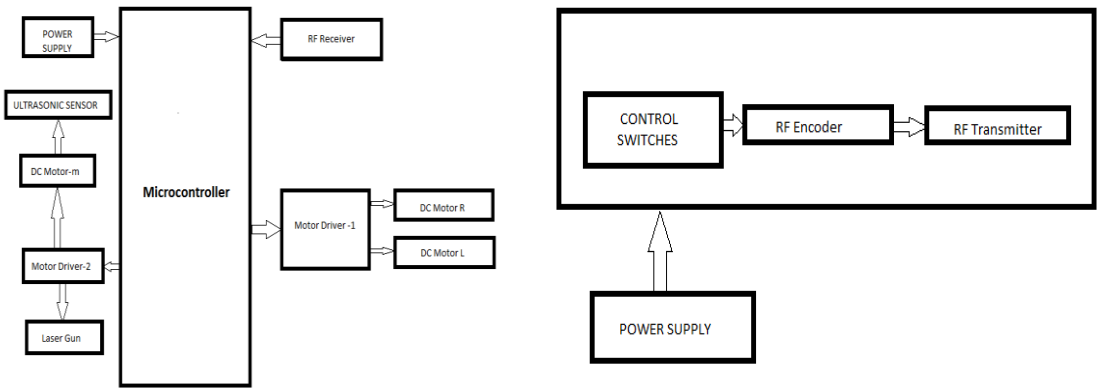
PROJECT ID : 2451-14-735-065.066.086
GUIDE NAME : SYVA SRINIVAS
DEPARTMENT : ELECTRONICS AND COMMUNICATION ENGINEERING

ABSTRACT:
Today in the twenty first century the missile technology is rapidly developing. These missiles can be tracked with the help of Radar. In order to make its design simple, easy to install the project has been designed in such a manner that the missile is detected using ultrasonic sensor at cheaper cost.
Our project is missile detection and automatic destroy system on Robot Platform. We use microcontroller AT89S52 for loading embedded C program. We use DC motor on that we mount ultrasonic sensor rotate continuously rotate in 180-degreedirection.If any obstacle come in between ultrasonic ray that time DC motor will stop and Laser gun gets ON. Here we use Laser for destroying purpose as obstacle is destroyed.
Here we also make Robotic Platform for movement of our whole kit in all required direction it means forward, backward, left, right etc. for that RF transmitter for sending wireless data, RF receiver for receiving data and motor drive IC for movement for robot according to our input data.

TECHNOLOGIES USED:

- Microcontroller
- Ultrasonic sensor
- DC Motors
- Laser gun
- RF Transmitter &Receiver

FUNCTIONAL BLOCK DIAGRAM:



(i). Block Diagram (ii). Remote Station Unit

APPLICATIONS:

- This can be applied in various defense fields to protect the country from foreign assaults.
- This can be used to increase the security of the flight attack by any missile.
- This can be used during any war where the role of antimissile defense becomes very important.

MULTI-COLOUR LINE FOLLOWER WITH OBSTACLE DETECTION

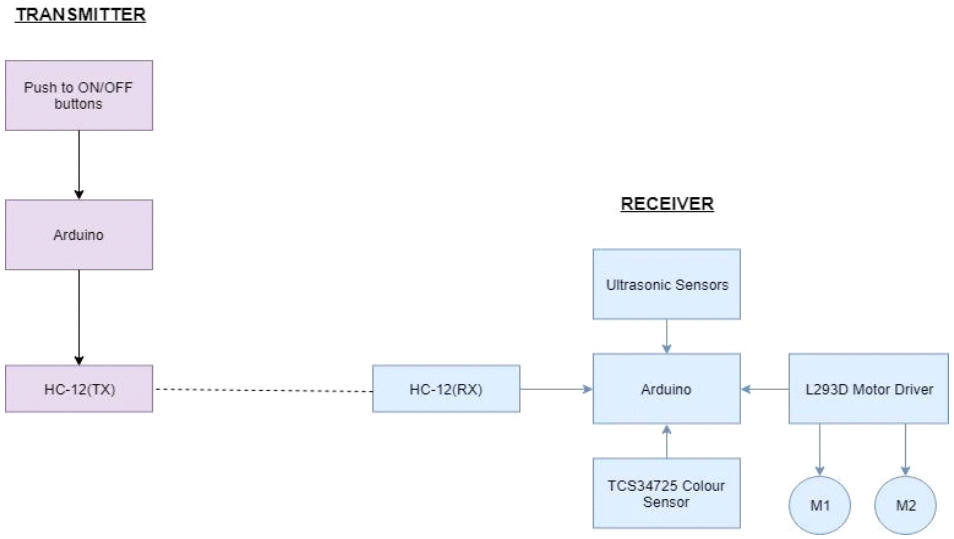
PROJECT ID: 2451-15-735-014.020.026
GUIDE: Mr.B.Srinivas
DEPARTMENT: ELECTRONICS AND COMMUNICATION ENGINEERING

ABSTRACT:
Robotics has greatly advanced in the developed countries. High performance, high accuracy, lower labour cost and the ability to work in hazardous places have put robotics in an advantageous position over many other such technologies. This project introduces the multiple colour line follower robots having the ability to choose a desired line among multiple coloured lines autonomously. Every line has different colours as their identities. The robot can differentiate among various colours and choose a desired one to find its target. The robot senses a line based on the colour using a colour sensor TCS34725 and endeavours itself accordingly towards the desired target. Here wireless sensor network HC 12 is used to receive the information from transmitter section to receiver section. This robot was developed based on a sensor based system to navigate the robot through different coloured lines marked in the white surface. It also extracted some features in the sensor to follow a line with automatic colour detection and follow that colour in white surface. Ultrasonic sensors are used for obstacle detection.

TECHNOLOGIES USED:

- HC-12.
- Ultrasonic sensors.
- Colour Sensors.

BLOCK DIAGRAM :



APPLICATIONS:

- It is used in Industries.
- It can be used in restaurants.
- It is used in hospitals.

COURSES APPLIED:

- Operation of HC-12 Wireless communication module.
- Operation of TCS34725 colour sensors.
- Operation of Ultrasonic sensors.

TOUCH SCREEN AND ZIGBEE BASED WIRELESS COMMUNICATION ASSISTANT FOR ILLITERATES

PROJECT ID: 2451-16-735-134.103.097
GUIDE: **Mrs.** KVBL DEEPTHI
DEPARTMENT: ELECTRONICS AND COMMUNICATION ENGINEERING

ABSTRACT:
The main aim of this project is to construct a user friendly multi-language communication system for illiterate/dumb people traveling by Airlines. As we have different languages in our world and its impossible for us to know all the languages. So, in this project we are building a device that helps them in expressing their needs with other language people(Air hostess) i.e. request them if we need anything in the flight like coffee, tea, drinks etc.

TECHNOLOGIES USED:

1. Picc microcontroller
2. ZigBee technology.

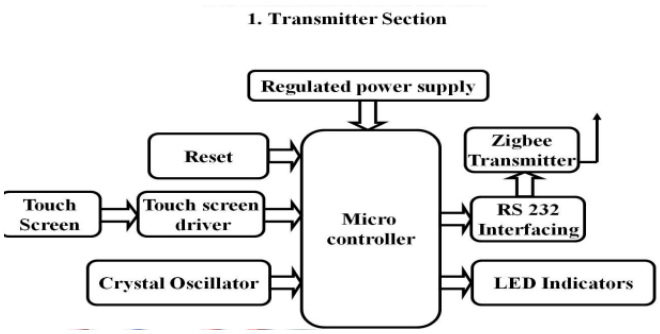
APPLICATIONS:

1. It is used in airlines.
2. It is applicable in hospitals.
3. It is used in restaurants.
4. Helpful in abroad to express user's needs.
5. Deaf and Dumb people can also interact with others.
6. Can be used with any languages.

COURSES APPLIED:

1. Architecture and operation of zigbee.
2. PIC C Microcontroller and GLCDS.
3. Touch Screen

BLOCK DIAGRAM



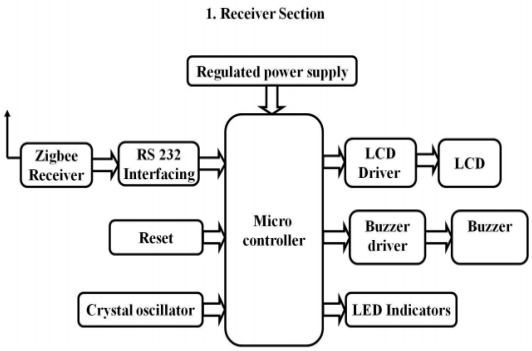
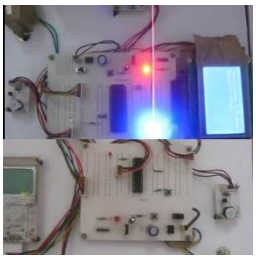


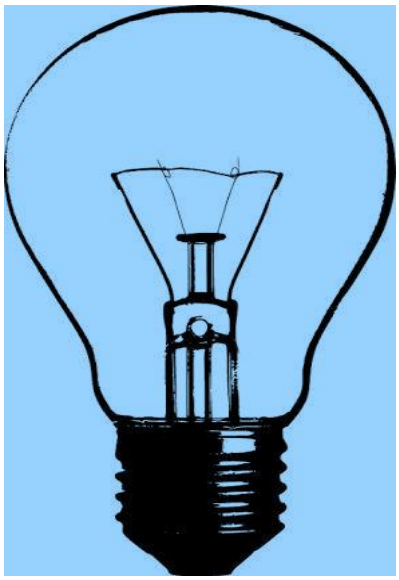
IMAGE OF THE PROJECT



ORIGINAL AUTHORS: Roll No:2451-14-735-127. 140.165

DEPARTMENT OF

ELECTRICAL AND ELECTRONICS ENGINEERING



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

VISION

To impart knowledge and prepare the students to become committed professionals with human values.

MISSION

The department strives to provide the engineering foundation as well as professional, innovative and leadership skills to the students through the following activities:

- ✓ Provide sound foundation in the areas of power systems, drives and electronics and allied engineering areas.
- ✓ To create an ambiance that provides personalized and supportive environment to make learning joyful and stimulating.
- ✓ Encourage design and development of electrical systems promoting innovation and entrepreneurial skills.
- ✓ Inculcate communication skills, lifelong learning, ethics in professional practices and societal responsibility.

PROGRAM EDUCATIONAL OBJECTIVES

Electrical and Electronics Engineering is a broad discipline that incorporates skills and expertise in the areas which are essential to most sectors of industry. Bachelors program in Electrical and Electronics Engineering in the college is aimed at preparing graduates who will

- ✓ Demonstrate technical competence in identifying, formulating, analyzing, and creating engineering solutions including multi disciplinary technical areas.
- ✓ Continuously enhance their skills through higher education or research to emerge as competent technologist, educators or professionals.
- ✓ Advance in their careers as successful professionals demonstrating ethical and societal responsibilities.

Department of Electrical and Electronics Engineering

PROJECT TITLES

S. No	Project title
1	Servo Controlled Voltage Stablizer using OP AMP
2	Development of Coal mines safety using wireless sensor network
3	Automatic light detection and intensity control
4	Arduino Based Energy Metering System
5	Automatic Transformer Load Sharing
6	Arduino Based Vehicle Tracking System Using Gps And Gsm
7	LI-FI
8	Design, Development And Implementation Of A Quaternion-Based Three Dimensional Controller
9	Differential ,Under And Over Voltage Protection Of Single Phase Transformer
10	Arduino Based Voice Controlled Robot
11	Under Ground Cable Fault Detection Using Arduino & GSM

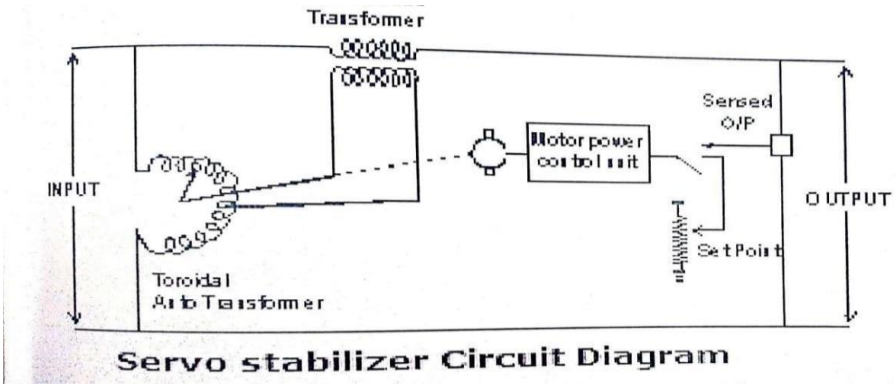
SERVO-CONTROLLED VOLTAGE STABILIZER

PROJECT ID: 2451-16-734-061, 075
GUIDE: Mr. N. Ravi
DEPARTMENT: ELECTRICAL AND ELECTRONICS ENGINEERING

ABSTRACT:
A servo stabilizer constantly monitors the output voltage and controls the variations in the input voltage by movements of the motor. This motor in turn selects the proper output voltage on the variable transformer (variac) or autotransformer and constant output without fluctuations. The need of this system has arouse as it is observed that the line supply voltages are never constant. Hence to prevent from the losses like overload conditions, heavy line losses, poor power factor and other problems of machinery damage. The motor is mechanically attached to the arm of a continuously variable autotransformer which feeds the primary of a series control buck boost transformer. The stabilizer output voltage is compared with the reference voltage and resultant error signal controls the servo motor providing true proportional control systems rather than on\off circuit and gives constant voltage at output.

TECHNOLOGY USED: Servo motors, control systems

FUNCTION BLOCK DIAGRAM:



APPLICATIONS: 1) CNC machines 2) Signaling radars 3)AC motors

COURSES APPLIED: Control systems, Electrical machines, Analog Electronics

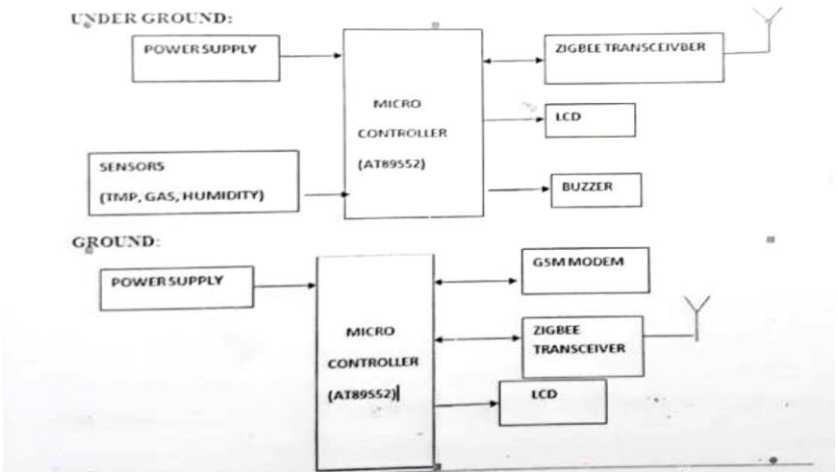
IMAGE OF THE PROJECT:
ORIGINAL AUTHORS: 2451-14-734-099, 100 and 313

DEVELOPMENT OF COAL MINE SAFETY SYSTEM USING WIRELESS SENSORS NETWORK

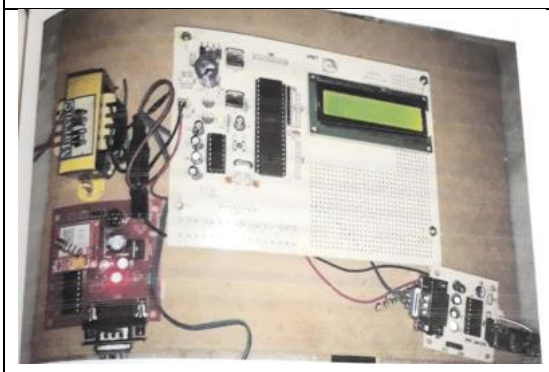
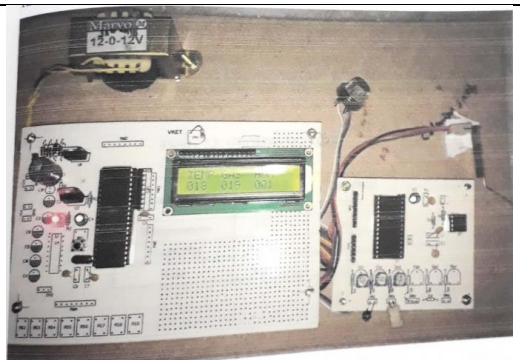
PROJECT ID: 2451-16-734-006, 014
GUIDE : Mr. V. Raghu Krishna
DEPARTMENT : ELECTRICAL AND ELECTRONICS ENGINEERING

ABSTRACT : In the Era of embedded technology, Zigbee protocols are used in various applications. Because of the rapid development of sensors, microcontrollers, and network technology, automatic real-time monitoring of coal mine is designed. The application designs a monitoring system for coal mine safety based on Zigbee wireless sensor network.
The underground system collects temperature, humidity, and gas values of coal mine through sensor nodes in the mine, and then transmits the data to microcontroller. The microcontroller sends data to the ground section through Zigbee, and in the ground section, the microcontroller monitors the data and sends an SMS to the corresponding member through GSM modem which is collected to the controller. If any data is received, the received data is compared with the predefined threshold values then SMS will be sent to warn the personnel.

FUNCTIONAL BLOCK DIAGRAM :



TECHNOLOGY USED : Zigbee
APPLICATIONS : Safety of Coal Mines and Human life
COURSES APPLIED : Microcontrollers, Analog Electronics, Programming skills
IMAGE OF THE PROJECT :

UNDERGROUND SECTION	CONTROL ROOM
	

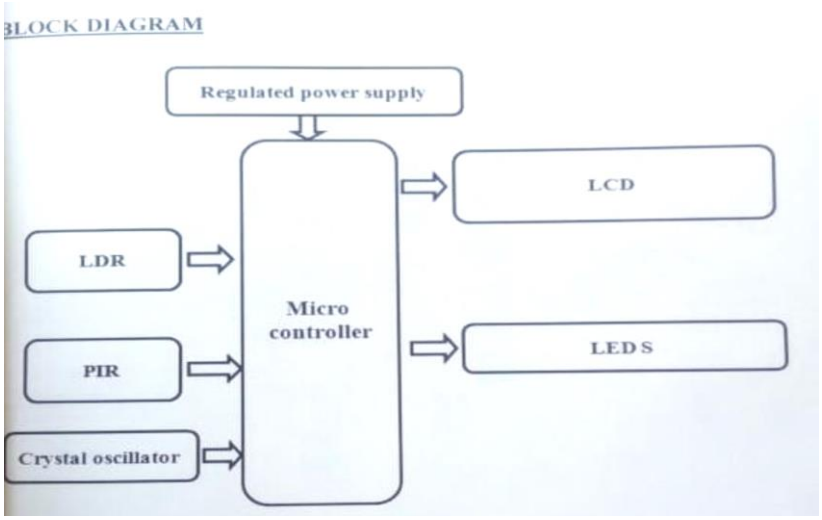
ORIGINAL AUTHORS : 2451-14-734-103, 315 and 316

AUTOMATIC LIGHT DETECTION AND INTENSITY CONTROL

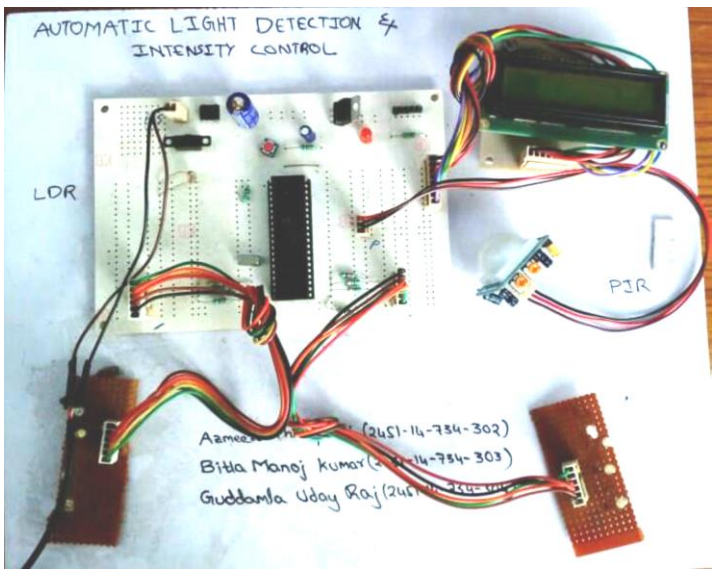
Project ID: 2451-16-734-063. 072
GUIDE: Mrs D.SAI PRASANNA.
DEPARTMENT: ELECTRICAL AND ELECTRONICS ENGINEERING

ABSTRACT: In this design both microcontroller and light sensors used for automatic room light detection and control. In the design, the HLCM (Home light control module) which will be installed in every light fixture of family, is made up of four blocks: pyroelectric infrared sensor circuit, light sensor circuit, microcontroller. By using the PIR sensor circuit the HLCM detects, if a human enters the detection area or not. If there is no human present all controlled lights are turned off, otherwise HLCM detects the light intensity under environment and maintains sufficient light by controlling the number of lights. It can also integrate an RF module to transmit and receive data from each HLCM so we can control different lights in different region. The result of using HLCM shows that the total power consuming is reduced.

FUNCTIONAL BLOCK DIAGRAM:



TECHNOLOGY USED: microcontroller, PIR sensor.
APPLICATIONS: Human detection in room, light intensity control**.**
COURSES APPLIED: Microcontroller and Analog Electronics
IMAGE OF PROJECT:



ORIGINAL AUTHORS: 2451-14-734-302, 2451-14-734-303, 2451-14-734-304.

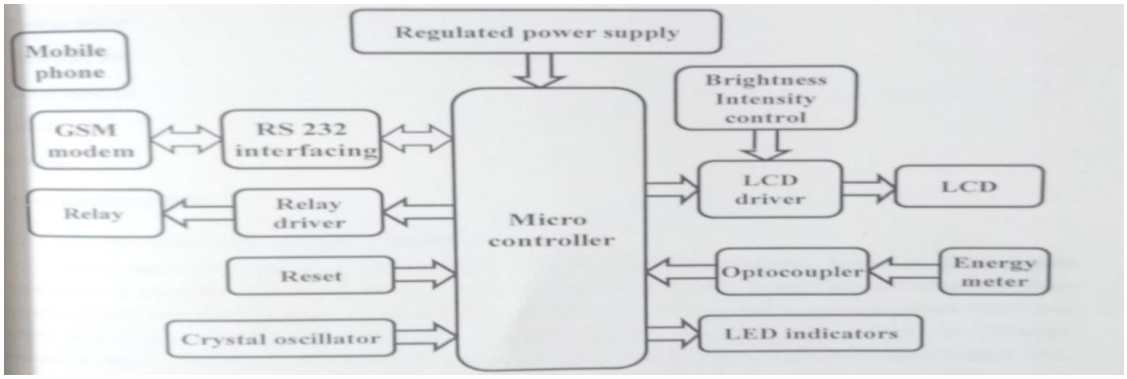
ARDUINO BASED ENERGY METERING SYSTEM

PROJECT ID: 2451-16-734-005. 007
GUIDE : Mr.P.B.Guruprasanna
DEPARTMENT: ELECTRICAL AND ELECTRONICS ENGINEERING

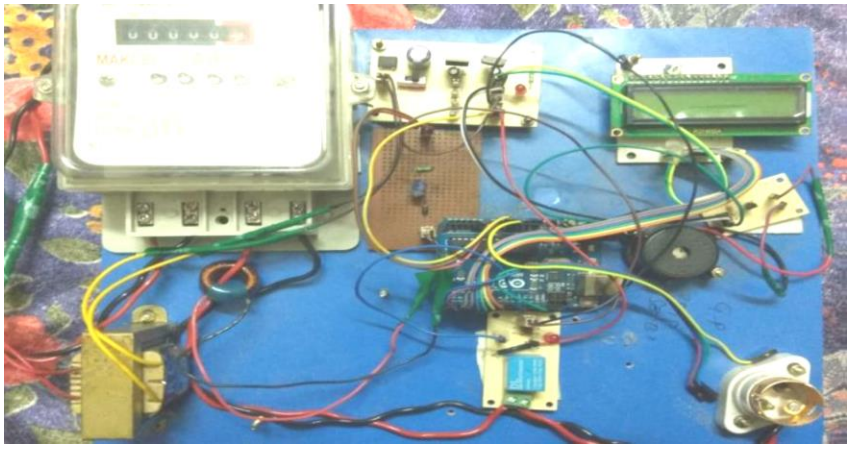
ABSTRACT: In this project, the idea of a prepaid energy meter using an arduino microcontroller has been introduced. This concept provides a cost efficient manner of electricity billing. The present energy billing systems are discrete, inaccurate, costly, and slow. This also time and labor consuming. The major drawback of traditional billing system is power and energy theft. This drawback is reduced by using a prepaid energy meter which is based on the concept "PAY FIRST AND THEN USE IT". Prepaid energy meter also reduces the error made by humans while taking readings to a large extent and there is no need to take reading in it . The prepaid energy meter uses a recharge card which is available in various ranges (i.e., Rs50, Rs100 etc.,). The recharge is done by using a keypad and the meter is charged with the amount. According to the power consumption, the amount will be reduced . An LDR circuit counts the amount of energy consumed and displays the remaining amount of energy on the LCD. A relay system has been used which shutdown or disconnect the energy meter and load through supply mains when the recharge amount is depleted. A buzzer is used as an alarm which starts before the recharge amount reaches a minimum value.

TECHNOLOGY USED: Energy metering system.

FUNCTIONAL BLOCK DIAGRAM:



APPLICATIONS: Energy billing system.
COURSE APPLIED: Embedded systems.
IMAGE OF THE PRODUCT:



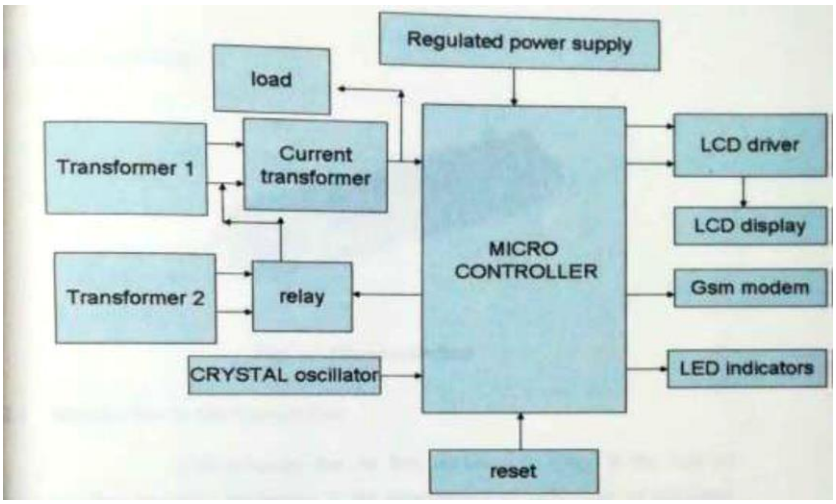
ORIGINAL AUTHORS: 2451-14-734-089, 114, 115

AUTOMATIC TRANSFORMER LOAD SHARING

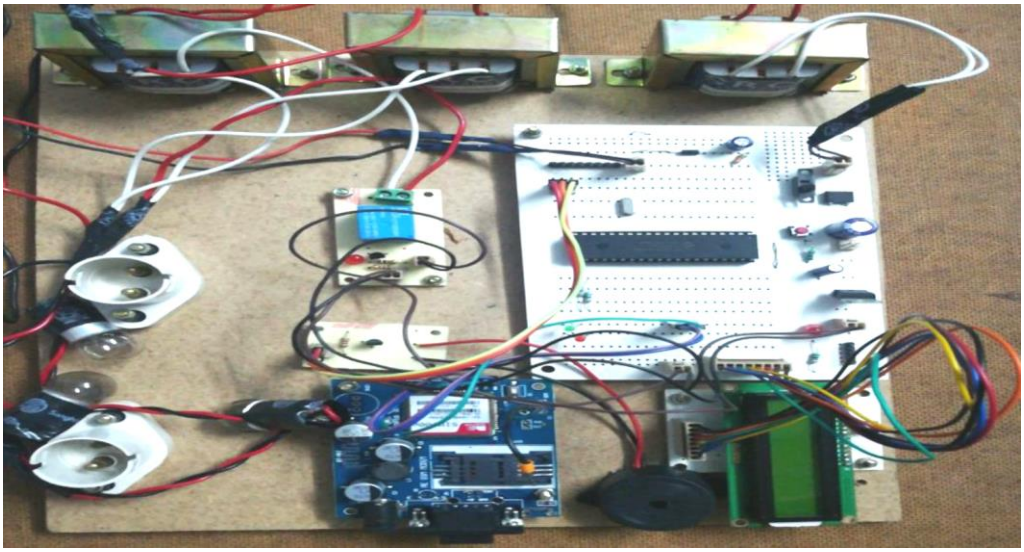
Project ID: 2451-16-734-019.027
Guide: Mr. Y.L.N.RAO
DEPARTMENT: ELECTRICAL AND ELECTRONICS ENGINEERING

ABSTRACT: Power transmitted from the power plant to the load centers through an amazing system called the power distribution grid. For power to be useful in the house or business, it comes off the transmission grid and is stepped down to the distribution grid. The main aim of this project is transformer sharing whenever the load is increased for certain value. The transformer load sharing is done by the micro controller with the help of electro-magnetic relay And GSM. The load will be monitored on LCD with the help of current transformer. The controlling device of the project is a Microcontroller to which the input and the output modules are interfaced.

TECHNOLOGY USED: Microcontroller, GSM(Global System for Mobile Communication)
FUNCTIONAL BLOCK DIAGRAM:



APPLICATIONS:
1. This system can be used in safety implementations at industrial load applications.
2. This system can be employed at homes for controlling devices
COURSES APPLIED: Embedded system
IMAGE OF THE PRODUCT:



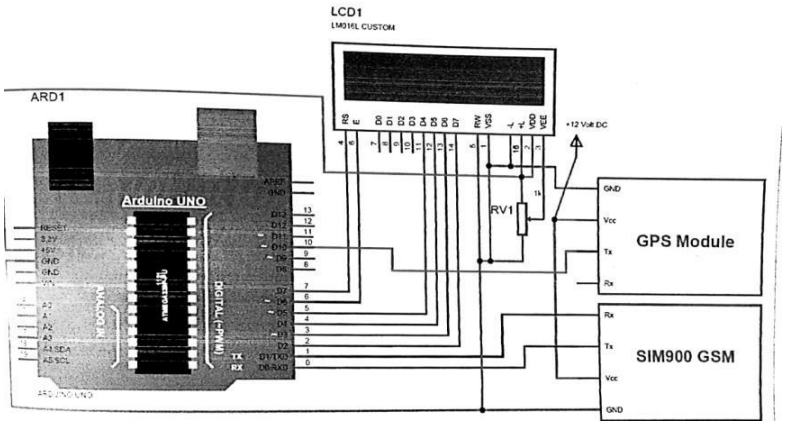
ORIGINAL AUTHORS: 2451-14-734-023, 042, 060

ARDUINO BASED VEHICLE TRACKING SYSTEM USING GPS AND GSM

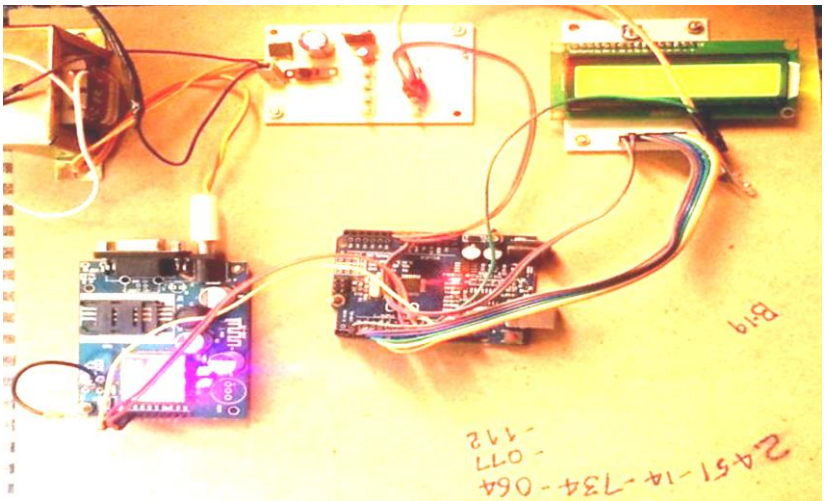
PROJECT ID: 2451-16-734-001.020
GUIDE : Mr. V.Raghu Krishna
DEPARTMENT: ELECTRICAL AND ELECTRONICS ENGINEERING

ABSTRACT : The ability to track vehicles is useful in many applications including security of personal vehicles, public transportation systems, fleet management etc. The development of vehicle tracking system using global positioning system (GPS) and global system for mobile communication (GSM) modem is undertaken with aim of enabling users to locate their vehicles with ease and in convenient manner. The system will utilize GPS to obtain a vehicle's coordinates and transmit it using GSM modem to the user's phone through mobile network. The Main hardware components are SIM900A GPRS module and Arduino Uno microcontroller. Tracking of vehicle is a process in which we track the vehicle location in form of longitude and latitude (GPS coordinates). This is an efficient system for tracking off door applications like school, college buses, stolen vehicles, cabs tracking etc..

TECHNOLOGY USED : Global system for Mobile communication (GSM); GPS
FUNCTIONAL BLOCK DIAGRAM:



APPLICATIONS : VIP vehicle tracking, security application.
COURSES APPLIED: Microcontroller
IMAGE OF THE PRODUCT:



ORIGINAL AUTHORS : 2451-14-734-064; 2451-14-734-077; 2451-14-734-112.

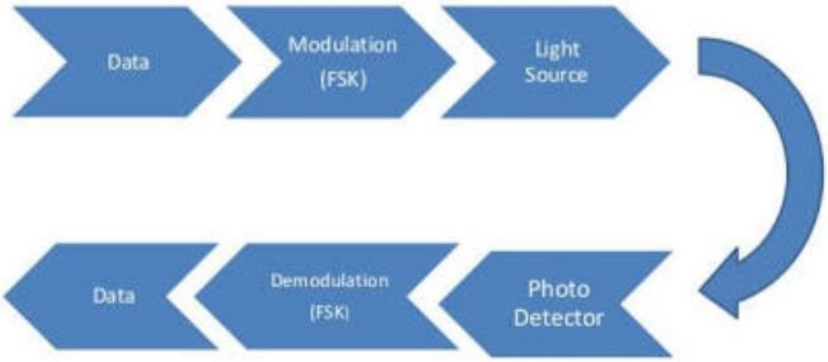
LI-FI

Project ID: 2451-18-734-095.074
DEPARTMENT:ELECTRICAL AND ELCTRONICS ENGINEERING

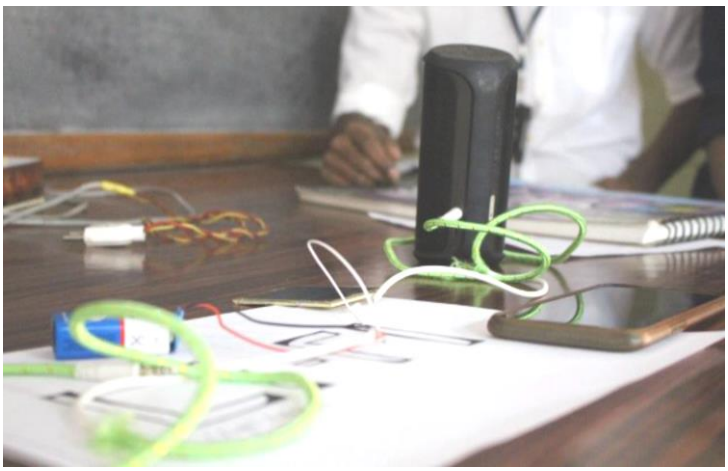
ABSTRACT: Li-Fi is a wireless optical networking technology that uses light-emitting diodes (LEDs) for data transmission. Visible light communications (VLC) works by switching the current to the LEDs off and on at a very high speed. Li-Fi is designed to use LED light bulbs similar to those currently in use in many energy-conscious homes and offices. However, Li-Fi bulbs are outfitted with a chip that modulates the light imperceptibly for optical data transmission. Li-Fi data is transmitted by the LED bulbs and received by photoreceptors.
By using Li-Fi in all the lights in and around a building, the technology could enable greater area of coverage than a single WiFi router. Li-Fi has the advantage of being useful in electromagnetic sensitive areas such as in aircraft cabins, hospitals and nuclear power plants without causing electromagnetic interference. Both Wi-fi and Li-fi transmit data over the electromagnetic spectrum, but whereas Wi-Fi utilizes radio waves, Li-Fi uses visible light, Ultraviolet and Infrared. The visible light spectrum is 10,000 times larger than entire radio frequency spectrum.

Benefits of LiFi:
- Higher speeds than Wi-Fi.
- 10000 times the frequency spectrum of radio.
- More secure because data cannot be intercepted without a clear line of sight.
- Eliminates neighboring network interference.
- Unimpeded by radio interference.
- Does not create interference in sensitive electronics, making it better for use in environments like hospitals and aircraft

FUNCTIONAL BLOCK DIAGRAM



IMAGE



ORIGINAL AUTHORS: 2451-18-734-095(vivek),2451-18-734-074(surya teja)

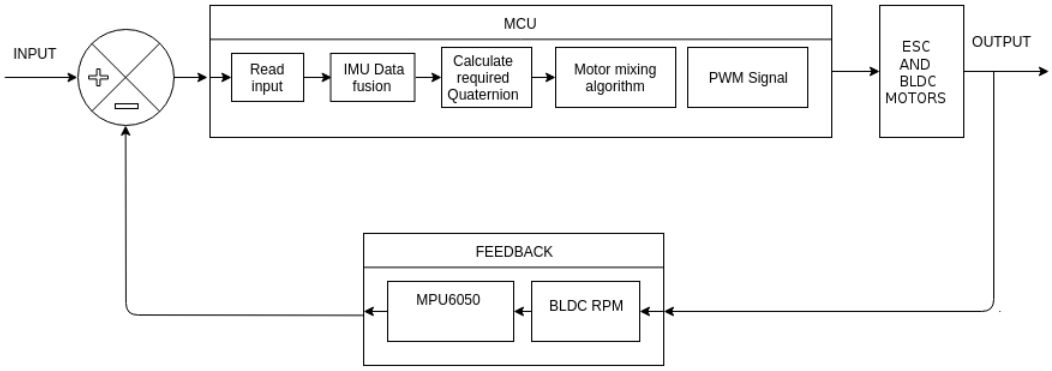
DESIGN, DEVELOPMENT AND IMPLEMENTATION OF A QUATERNION-BASED THREE DIMENSIONAL CONTROLLER.

Project ID: 2451-15-734-002. 012
Guide: Mr. N. Shiva Rama Krishna
DEPARTMENT: ELECTRICAL AND ELECTRONICS ENGINEERING

ABSTRACT: A three dimensional system can be controlled using several types of control loop feedback mechanisms. This project aims to design, develop and implement an economical and practically feasible closed loop controller based on the mathematical model of Quaternions in a real-time environment. The proposed controller is realized digitally and is implemented on a quadcopter, owing to the fact that quadcopters can be easily custom built and are cost-effective equipment to analyze and solve complex three dimensional problems. The control algorithm being implemented utilizes the concept of a PID controller which is coded using C programming language and executed on a microcontroller interfaced with BLDC motors using Electronic Speed Controllers (ESCs).

TECHNOLOGIES USED: AVR 8-bit and ARM32 type microcontrollers, C/C++ based IDE
- Microelectromechanical systems (MEMS) ;
- Anisotropic Magnetoresistive (AMR) technology;
- Brushless DC (BLDC) Motors;
- MOSFET-based programmable ESCs with Battery Elimination Circuit (BEC);
- Bluetooth and I2C communication technology;

FUNCTIONAL BLOCK DIAGRAM:



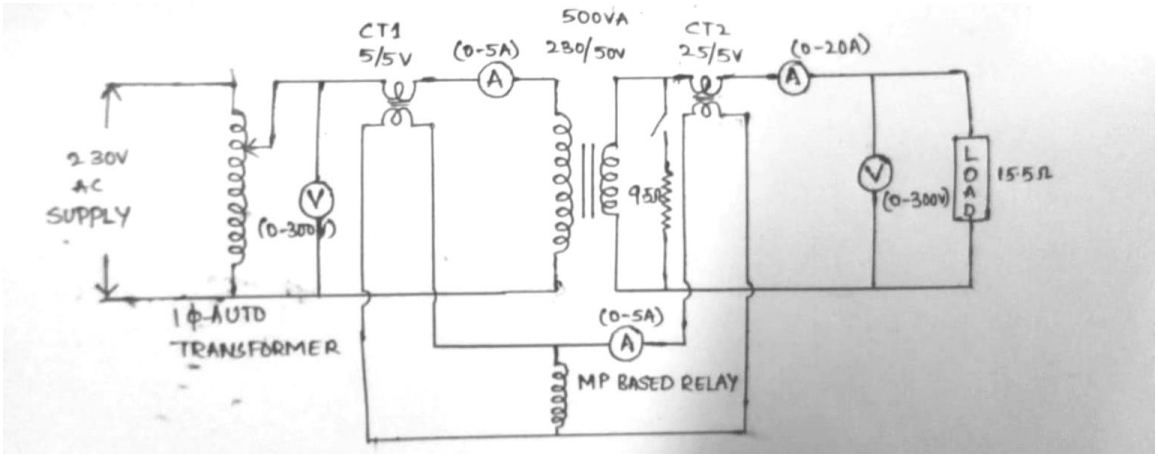
APPLICATIONS: 1. Flight control mechanism for a 3D body.
2. A self-correcting drone system would be highly stable even when large disturbances are imposed on the system. Hence, in theoretical terms, this system can be used at high altitudes for trouble-free continuous surveillance of EHV and UHV transmission lines.
Courses Applied: Control Systems, Digital Electronics, Embedded Systems, Electrical Machines, Programming with 'C' and 'C++', Electronics Engineering, Engineering Physics
Image of the project :

ORINGINAL AUTHORS:2451-15-734-002.012

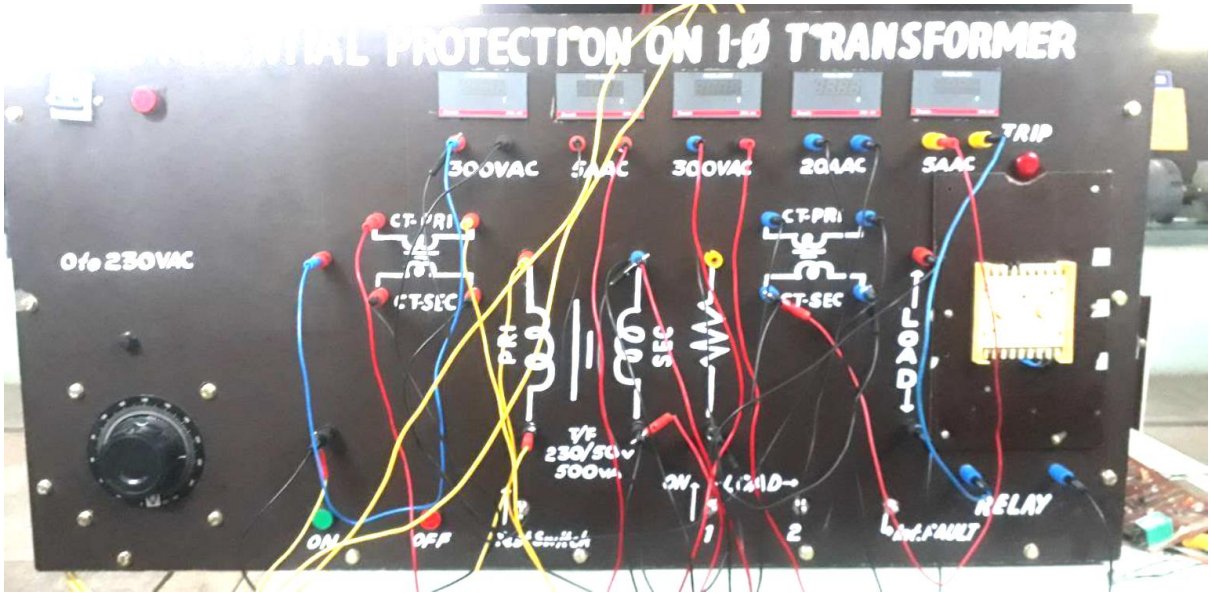
DIFFERENTIAL, UNDER AND OVER VOLTAGE PROTECTION OF SINGLE- PHASE TRANSFORMER

Project ID: 2451-15-734-020. 309. 310. 311
GUIDE : Dr. D .Venu Madhava Chary
DEPARTMENT: ELECTRICAL AND ELECTRONICS ENGINEERING

ABSTRACT : This project presents Differential, under and over voltage protection of single phase transformer. Power transformer is an expensive part of power network. The transformers are typically used to step up or step down voltage in power transmission and distribution. The problems associated with single phase transformer are internal, under and voltage faults. This project facilitates the protection of single phase transformer against faults. Current transformers are installed on either primary or secondary sides of transformer for applying the protection correctly. Microprocessor based over current relay is used for differential protection. This senses even the small milli amps of fault current. Whenever there is an over voltage or under voltage LM358 will sense the fault and gives signal to the relay for protection.
TECHNOLOGY USED: Differential Protection.
FUNCTIONAL BLOCK DIAGRAM:



APPLICATIONS: Protection of transformers in Electrical Distribution System
COURSES APPLIED : Switch gear and protection.
IMAGE OF THE PRODUCT:



ARDUINO BASED VOICE CONTROLLED ROBOT

PROJECT ID: 2451-16-734-069. 081 . 088

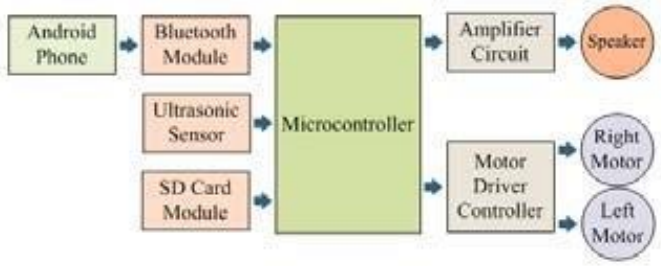
GUIDE : Mr. P V V Raghava Sharma

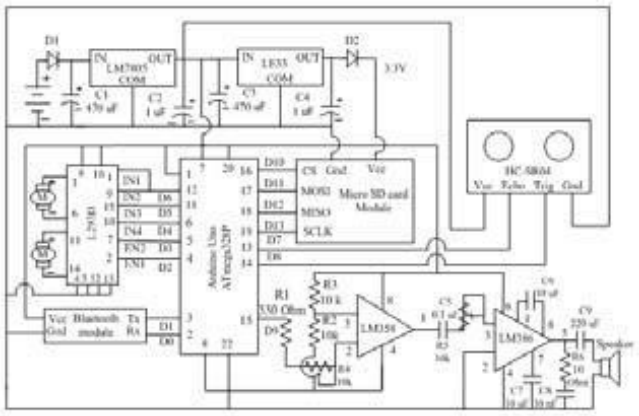
DEPARTMENT: ELECTRICAL AND ELECTRONICS ENGINEERING

ABSTRACT : The purpose of robotics in commercial & residential intention has come to be quite essential for executing challenging work into more conveniently simple way. There are a lot of researches working on to enhance the connection between humans and robot. The paper presents the research of the designing & development of a voice controlled talking robot using mobile phone based on Arduino Uno microcontroller. The control system of the robot movement will be employed by the voice and the robot will response the commanding persons by generating sounds of human voice with each verbal instruction. The proposed system will be designed based on microcontroller which is connected to smart android phone through Bluetooth module for receiving voice command. The voice command is converted to text by an app of the android phone and sends necessary data to the microcontroller for controlling robot movement. After receiving the data the robot responses according to the command by performing proper movement to the proper direction according to the voice command. A SD card module along with a SD card which will consist some pre-recorded human voice as audio file will be used by the robot for the development of the robot's talking system. After getting each command the robot will act according to the instruction and will be able to speak different sentences.

TECHNOLOGY USED: ARDUINO UNO , L298N MODULE, HC-05 BT MODULE, 12V BATTERY.

FUNCTIONAL DIAGRAM:



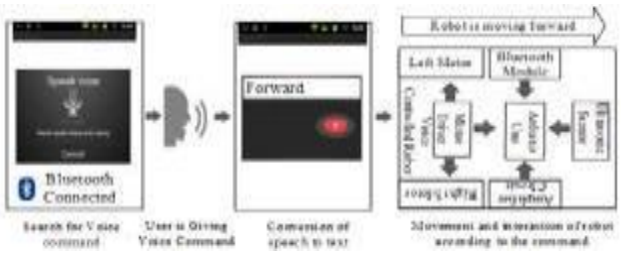


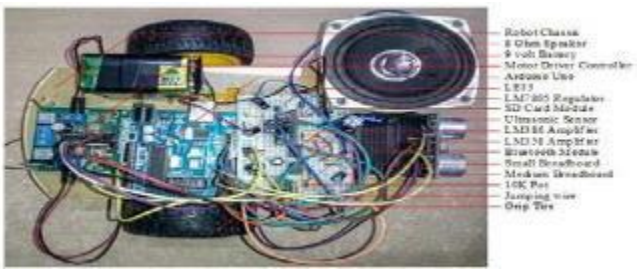
APPLICATIONS:

- The robot is useful in places where humans find difficult to reach but human voice reaches. E.g. in fire situations, in highly toxic areas.
- Command and control of appliances and equipment.
- Speech and voice recognition security and surveillance systems.

COURSES APPLIED: Micro processors and micro controllers and c programming**.**

IMAGE OF THE PRODUCT:

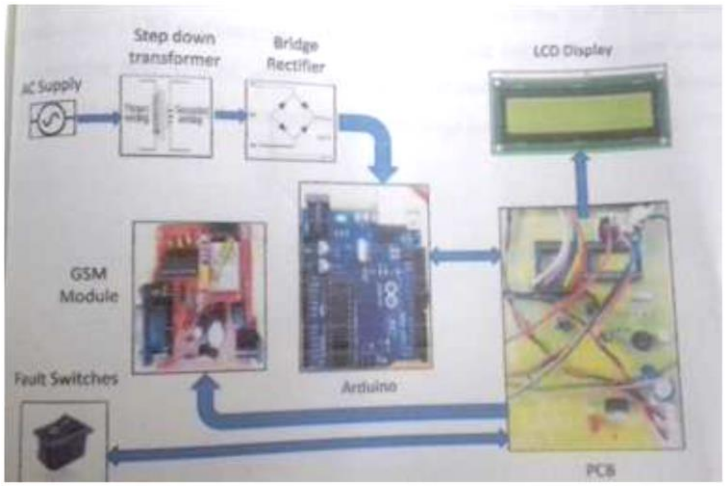




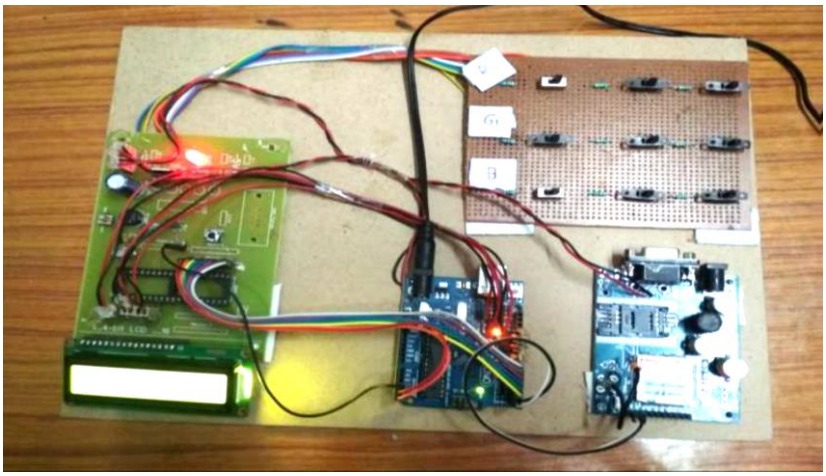
UNDERGROUND CABLE FAULT DETECTION USING ARDUINO AND GSM

PROJECT ID: 2451-16-734-032, 060
GUIDE: Mrs. K. Navya Tejaswini

ABSTRACT: The objective of the project is to determine the distance of underground cable fault from the base station in kilometres. While a fault occurs for some reason, at that time the repairing process to that particular cable is difficult due to exact unknown location of the fault in the cable. Proposed system is used to find out the exact location of the fault and to send SMS with details to a remote mobile phone using GSM module.In case there is a short circuit (Line to Ground); the voltage across series resistors changes according to the resistance those changes with distance. This is then fed to a precise digital data which the programmed Arduino displays in kilometres.
The project is assembled with a set of resistors representing the cable length in km and the fault creation is made by a set of switches at every known km to cross check the accuracy of the same. The fault occurring at a particular distance, the respective phase along with the distance is displayed on the LCD. The same information is also sent to the concerned authority mobile phone over GSM, interfaced to the microcontroller. This project can be enhanced by using capacitor in an AC circuit to measure the impedance which can even locate the open circuited cable, unlike short-circuited fault that uses only resistors in DC circuit as followed in the above proposed project.
TECHNOLOGY USED: GSM
FUNCTIONAL BLOCK DIAGRAM:



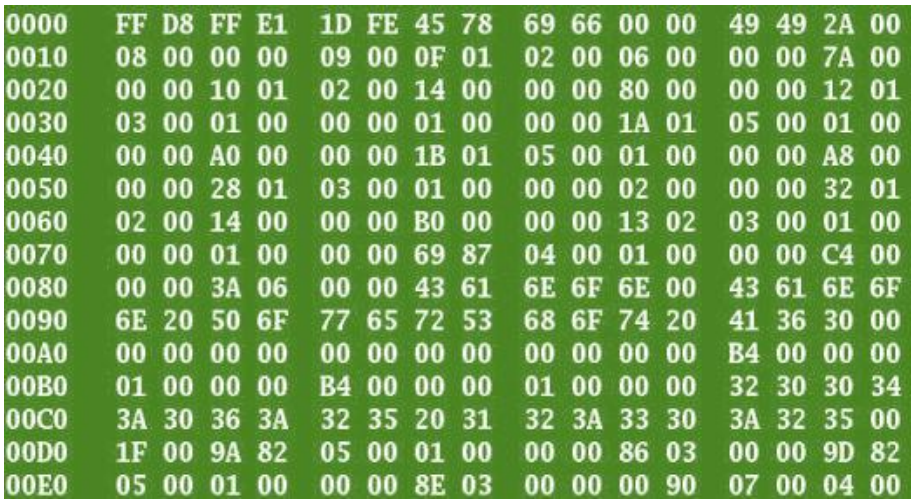
APPLICATIONS: 1) Music recordings 2) Digital Signal Processing
COURSES APPLIED: Microprocessors and Microcontrollers, Arduino, GSM
IMAGE OF THE PROJECT:



ORIGINAL AUTHORS: 2451-14-734-067, 080, 045

DEPARTMENT OF

INFORMATION TECHNOLOGY



DEPARTMENT OF INFORMATION TECHNOLOGY

VISION

To impart technical education to produce competent and socially responsible engineers in the field of Information Technology.

MISSION

- To make teaching learning process effective and stimulating.
- To provide adequate fundamental knowledge of sciences and Information Technology with positive attitude.
- To create an environment that enhances skills and technologies required for industry.
- To encourage creativity and innovation for solving real world problems.
- To cultivate professional ethics in students and inculcate a sense of responsibility towards society

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

After 3 to 4 years of graduation, graduates of the Information Technology program will:

- Engage in Professional development or postgraduate education to be a life-long learner.
- Apply knowledge of mathematics and Information Technology to analyze, design and implement solutions for real world problems in core or in multidisciplinary areas.
- Communicate effectively, work in a team, practice professional ethics and apply knowledge of computing technologies for societal development.

PROJECT TITLES

S. No	Project title
1	Certification Validation Using Block chain
2	Classification of image categories from Brain activity using Deep Learning
3	IOT based smart parking system
4	Word Recognition system through speech using MFCC
5	College Enquiry Chabot
6	Weight Sensing Watch
7	Cancer Detection
8	Temperature Control fan using Arduino
9	Classification of IRIES flower
10	Smart Farming Technology system
11	Smart rescue wagon
12	Colour Based Sorting Machine

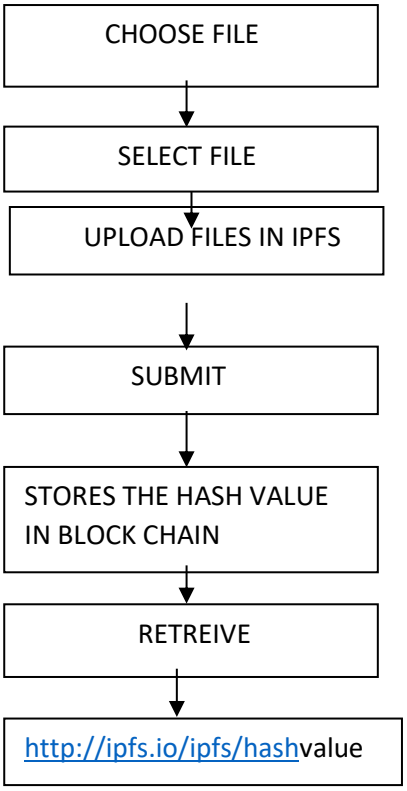
CERTIFICATE VALIDATION USING BLOCK CHAIN

PROJECT ID: 2451-16-737-034.036.042
GUIDE: K.Srilakshmi(Asst.prof)
DEPARTMENT: Information Technology

ABSTRACT:
Storing the school/university/board certificates is a recurring process. For the organization, verifying the authenticity of the certificates is tedious and cumbersome. The proposed solution will help the institutions to store the certificates in the decentralized way using the IPFS and block chain system and give access to any organizations or any institution in local host through hash value.

TECHNOLOGY USED: Blockchain Technology

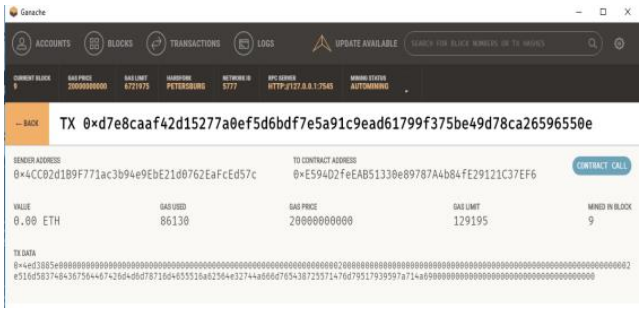
FUNCTIONAL BLOCK DIAGRAM:

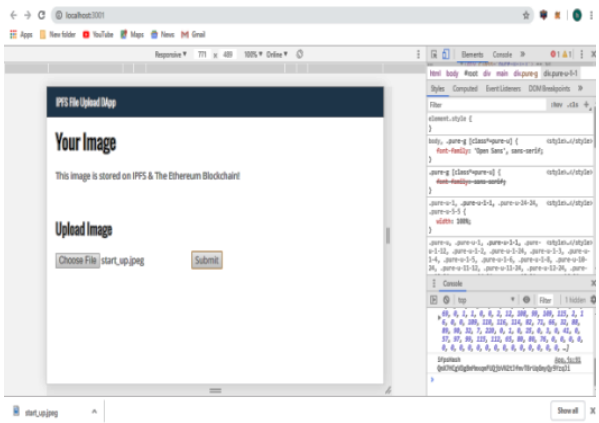


APPLICATIONS: It is used for validating certificates

COURSES APPLIED: Solidity, React.js, Truffle, IPFS, Ganache

IMAGES OF THE PRODUCT:





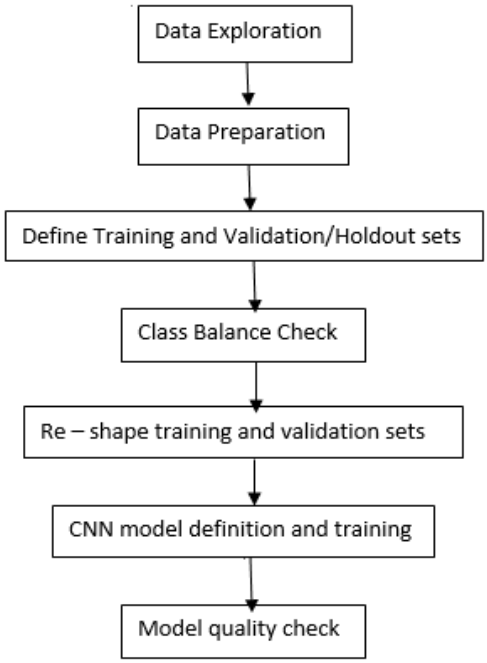
CLASSIFICATION OF IMAGE CATEGORIES FROM BRAIN ACTIVITY USING DEEP LEARNING

PROJECT ID: 2451-15-737-005.01.027.
GUIDE: A. Manasa, Assistant Professor
DEPARTMENT: Information Technology

ABSTRACT:

Recognizing different objects in day-to-day life is of fundamental importance for survival.
The purpose of this project is to construct an artificial system that performs as good as our own visual system.
Our approach of constructing an artificial system includes using brain activity as our data, feeding this data to a Machine Learning model, and checking how our model performs in comparison to our visual system.
Machine Learning paradigms include Supervised Learning techniques viz. Classification. Here, classification is achieved using Neural Networks.
Our dataset is a collection of brain activity captured while images were shown to human subjects.
TECHNOLOGIES USED: Python, Artificial Intelligence.

FUNCTIONAL BLOCK DIAGRAM:



APPLICATIONS:

- Insights gained could help in building much better AI powered object recognition systems

COURSES APPLIED: Python Programming, Deep learning, Computational NeuroScience.

IOT CAR PARKING SYSTEM

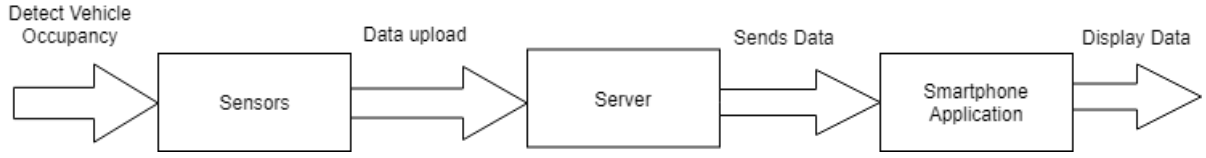
PROJECT ID: 2451-16-737-089.079.087
GUIDE: K Ramya Madhavi
DEPARTMENT: Information Technology

ABSTRACT:

Finding a place to park your vehicle in a highly populated cities can be a challenge.In order to solve this problem we have introduced a car parking system connected to the internet which indicates the presence of an empty parking slot which makes our life a bit easier

TECHNOLOGY USED: Arduino,IR Sensors,NodeMCU(ESP8266)

FUNCTIONAL BLOCK DIAGRAM:

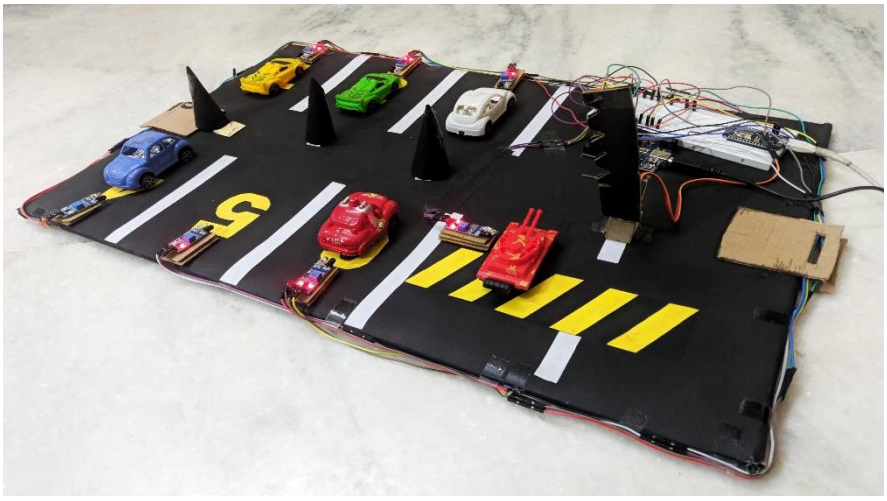


APPLICATIONS:

- Optimum usage of all parking spaces
- Reduces human labor and Fuel consumption

COURSES APPLIED: IOT, Arduino

IMAGE OF THE PRODUCT:



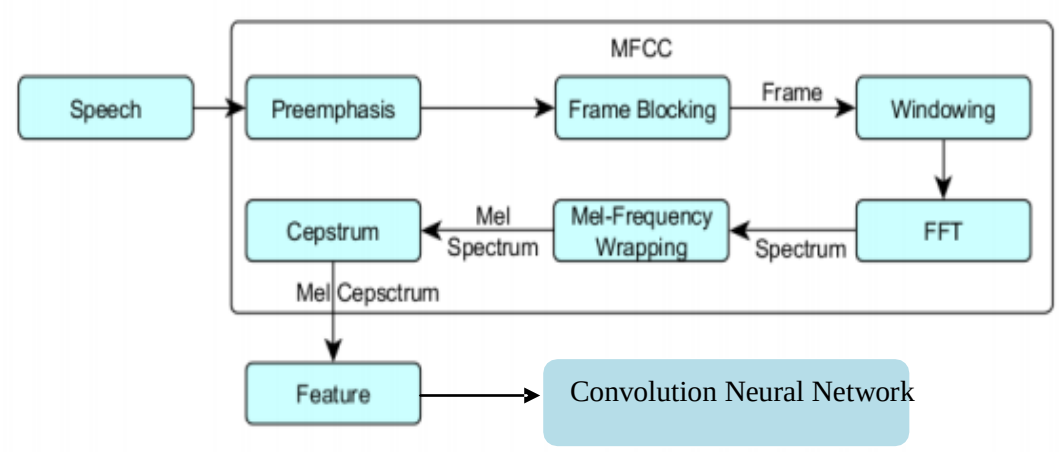
WORD RECOGNITION THROUGH SPEECH USING MFCC

PROJECT ID : 2451-15-737-001
GUIDE : Mr. V. Ashwini Kumar
DEPARTMENT : Information Technology

ABSTRACT : We can reduce the effort put in by people to pass a command to a machine in the form of typed text if we can give that system/machine the ability to recognise a word uttered. This ability of the machine provides us the advantage of using a word uttered by a person as a command to that machine/system or some other machine/system that is being controlled by our system. Here we have used the concept of MFCC (Mel-Frequency Cepstral Coefficients), to extract the features of a specific word and used that coefficients to train a CNN (Convolution Neural Network). So when it is recognised to identify a word, it's MFCC are extracted and passed to the CNN for recognition.

TECHNOLOGY USED : Python Libraries like Librosa, Keras. Audacity (For Data Collection)

FUNCTIONAL BLOCK DIAGRAM :



APPLICATIONS : Command Controlled IOT based applications, can be used for Home Automation Purposes.

COURSES APPLIED : Artificial Intelligence, Machine Learning

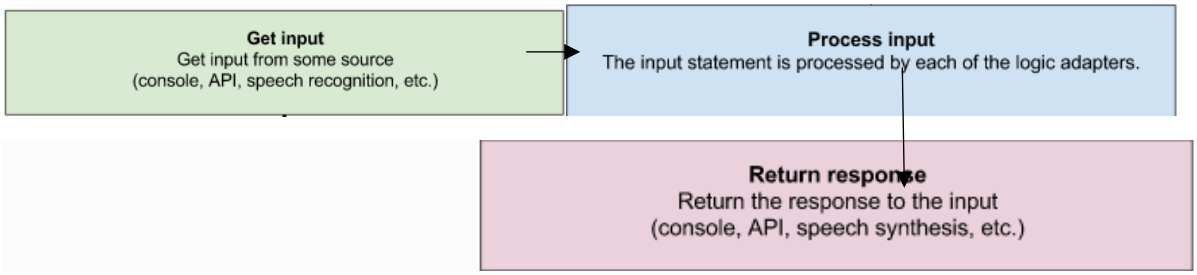
COLLEGE ENQUIRY CHATBOT

PROJECT ID: 2451-17-737-018
GUIDE: D. Muninder
DEPARTMENT: Information Technology

Abstract: Chatbots typically provide a text based user interface that allows theuser to ask questions and receive text or speech as response. Chatbotsprovide answers to a given query very effectively. They can alsobe integrated with website for the purpose of providing information for an organisation or for personal use. This chatbot uses a selection of machine learning algorithms to produce different types of responses. The language independent nature of chatbot allows it to be trained to speak any language. Additionally, machine learning nature of chatbot allows an agent instance to improve its own knowledge of possible responses as it interacts with humans and other sources of informative data.

TECHNOLOGY USED: Python (Libraries used: Flask, Chatterbot), JavaScript, HTML, CSS

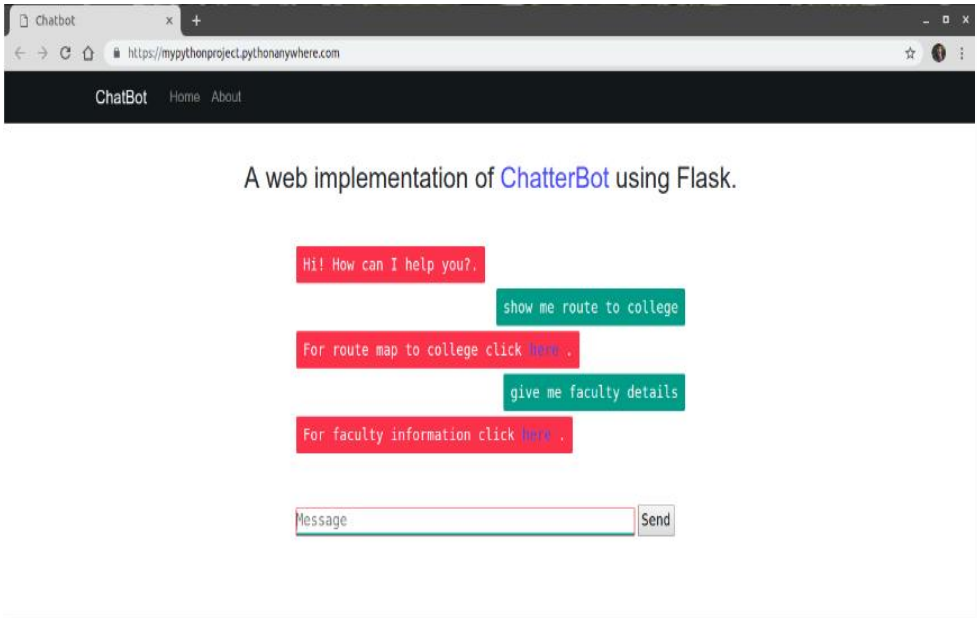
FUNCTIONAL BLOCK DIAGRAM:



APPLICATIONS: The Chatbot can be trained with any organization's information and can be used to answers questions it receives about it. Chatbot can also be used to quickly make reservations. Chatbots are an easy way of gathering details about anything.

COURSES APPLIED: Machine Learning, Python.

IMAGE OF THE PRODUCT:

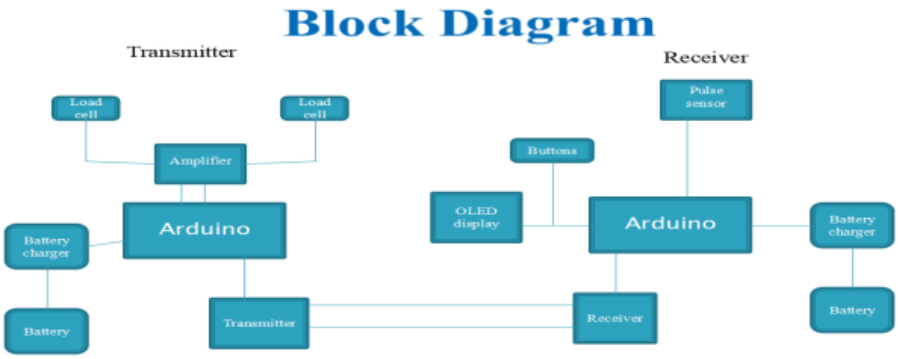


WEIGHT SENSING WATCH

PROJECT ID: 2451-15-737-009.028.037.
GUIDE: Mr. K. Chandra Sekhar (Assistant Professor)
DEPARTMENT: INFORMATION TECHNOLOGY
ABSTRACT: The intent of this project is to design an efficient and effective weight-based alarm system that can be used to check our weight. As we use watch to find time frequently, as in the same way, here is an opportunity to check our weight whenever and wherever we want. The device also provides more features like pulse sensing.

TECHNOLOGY USED: Embedded systems.

FUNCTIONAL BLOCK DIAGRAM:



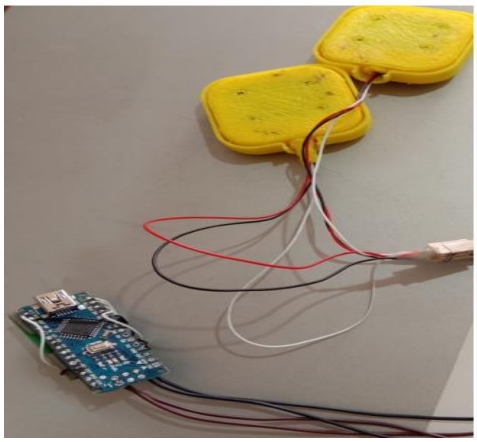
APPLICATIONS:

1. Continuous Weight Monitoring
2. Pulse Rate Sensing

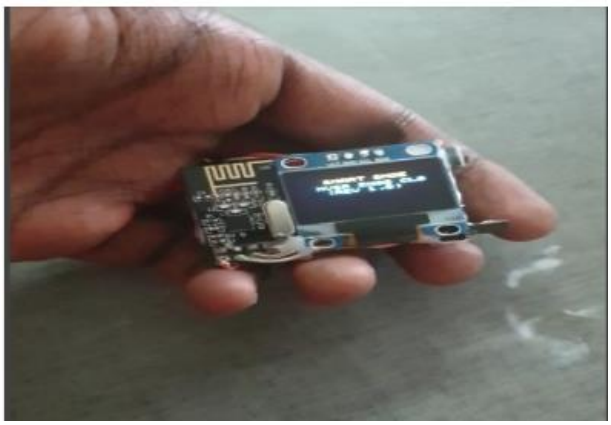
COURSES APPLIED: Micro-Controllers

IMAGE OF THE PRODUCT:

Transmitter



Receiver



CANCER DETECTION

PROJECT ID: 2451-16-737-001.013.016
GUIDE: K. Ramya Madhavi
DEPARTMENT: Information Technology

ABSTRACT: The field of machine learning promises to enable computers to assist humans in making sense of large, complex data sets. In this project first we collect the data of patients. Now we undertake 3steps, they are: converting the raw data into perfect one by data selection and data pre-processing is carried out, in this process we clean the data by removing the unwanted information and lastly we transform the data accordingly. Then we divide the data into training and testing data. Then we train the algorithm and test it. By using some mathematical formulas we check the accuracy of software and improve the algorithm. Well trained algorithm predicts the new data accordingly and classify them.

TECHNOLOGY USED:

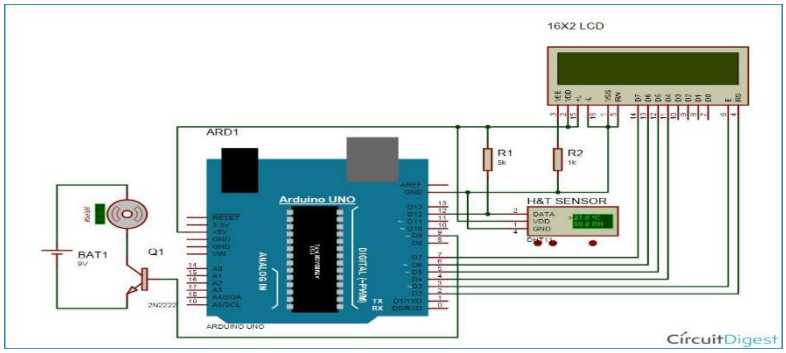
- Jupyter Notebook
- Python Libraries
  - Scikit-learn
  - Pandas
  - Numpy
  - Seaborn
  - Matplotlib
- Algorithm used:
  - Scikit-learn RandomForestClassifier

APPLICATIONS:
We used machine learning algorithms which can be used in many applications like:Banking, medical fields, genetics, image recognition, speech recognition, etc.

IMAGE OF THE PRODUCT:

```
In [23]:
#predicting by single sample
t=clf.predict([[0.3232050735955322 4,0.47480554616165027,0.3301084928477 6456,0.1927041357370095,0.7192380608467996,0.48285381
for i in range(len(t)):
    if t[i]=='M':
        #messagebox.showinfo("RESULT", "MALIGNANT")
        print("MALIGNANT")
    else:
        #messagebox.showinfo("RESULT", "BENING")
        print("BENING")
t
```

MALIGNANT



TEMPERATURE CONTROLLED FAN USING ARDUINO

PROJECT ID: 2451-16-737-003
GUIDE: Mrs.Ch. Srujana
DEPARTMENT: Information Technology

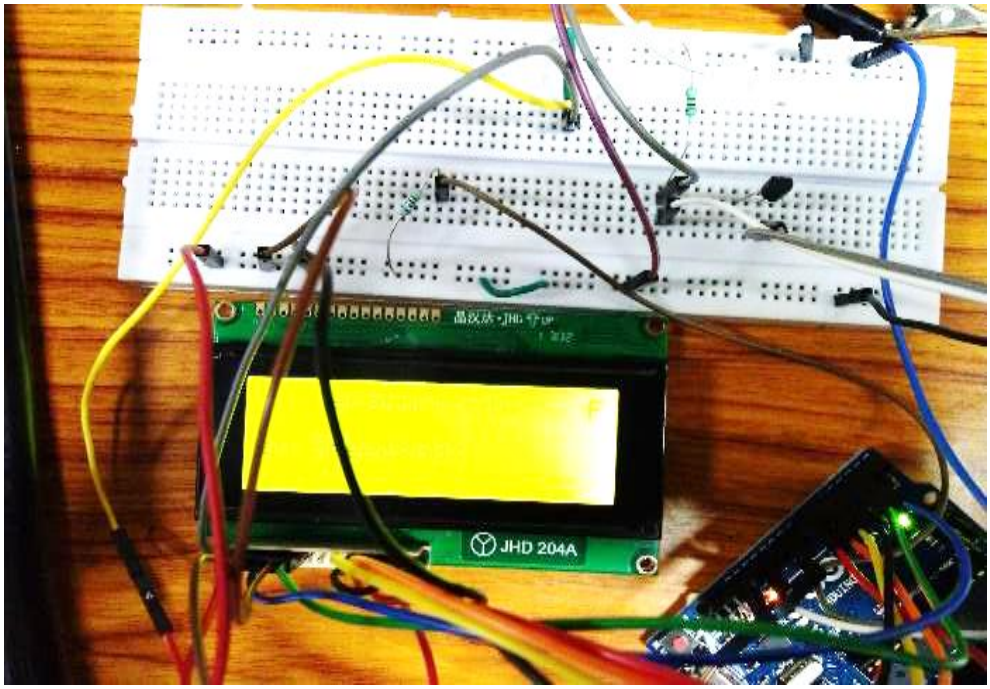
ABSTRACT: In this Arduino based project, we control DC fan speed according to the room temperature and display the parameter changes on a 16x2 LCD display. It is accomplished by the data communications between Arduino, LCD, DHT11 sensor Module and DC fan that is controlled by using PWM. PWM is a technique used to control voltage. This project consists of three sections. One senses the temperature by using analog temperature sensor namely DHT11. Second section reads the DHT11 sensor module's output and extracts temperature value into a suitable number in Celsius scale and controls the fan speed by using PWM. And third section of system shows fan speed and temperature on LCD screen. If the temperature is above the set point, the fan will be turned on and the speed of the fan will be controlled by using PWM until it reaches our set point and these parameter changes are displayed on the LCD display accordingly thus maintaining a set point temperature or ambient temperature depending on our application. The advantage of this project is it saves power to much extent and also removes human intervention.

SOFTWARE USED: Arduino, c

APPLICATIONS: Fans, automotive, laptops, server rooms and many other portable and non-portable electronic devices.

COURSES APPLIED: Embedded Systems

IMAGE OF THE PROJECT:



CLASSIFICATION OF IRIS FLOWER

PROJECT ID : 2451-16-737-010 .022.024
GUIDE: Ashwini Kumar
DEPARTMENT: Information Technology.

ABSTRACT:

Pretend we're working for a startup that just got funded to create a smartphone app that automatically identifies species of flowers from pictures taken on the smartphone. We're working with a moderately-sized team of data scientists and will be building part of the data analysis pipeline for this app. We've been tasked by our company's Head of Data Science to create a demo machine learning model that takes four measurements from the flowers (sepal length, sepal width, petal length, and petal width) and identifies the species based on those measurements alone. We've been given data set from our field researchers to develop the demo, which only includes measurements for three types of *Iris*flowers: Iris Setosa, Iris Versicolor, Iris Virginica. The four measurements we're using currently come from hand-measurements by the field researchers, but they will be automatically measured by an image processing model in the future.

APPLICATIONS: To obtain the type of Iris Flower based on the measurements.

COURSES APPLIED: Machine Learning, Data Science.

IMAGE OF THE PRODUCT:

SMART FARMING TECHNOLOGY SYSTEM

PROJECT ID: 2451-16-737-002
GUIDE: J.Sowjanya(Assistant Professor), Ch.Vijaya Bhaskar(Assistant Professor)
DEPARTMENT: Information Technology

ABSTRACT:
Smart Farming Technology System is an IOT based project which helps the farmers or users to obtain better quality crops by avoiding loss of nutrients. Basically, this project contains three types of sensors namely: Temperature, Humidity and Moisture. These sensors when placed in the soil takes the readings of the soil and let the users know about the soil condition. We also introduced automation into this project. Whenever moisture content decreases below its threshold value a motor is automatically turned on and water is supplied to plants. This project is advantageous in many ways like reduced labor cost, increased crop quality and production.

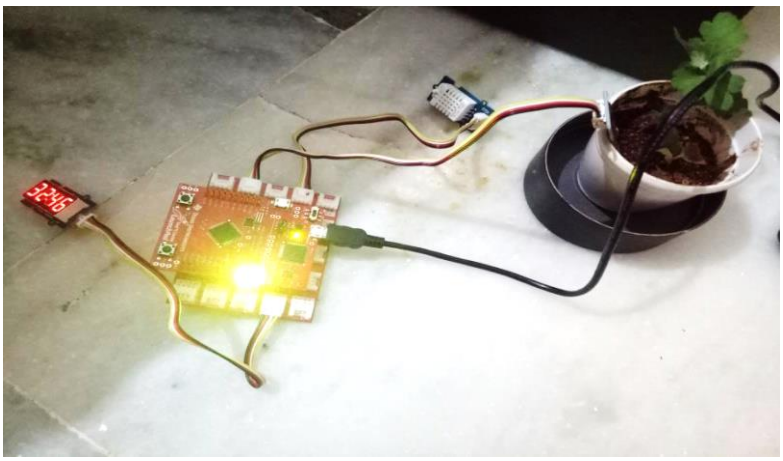
TECHNOLOGY USED:

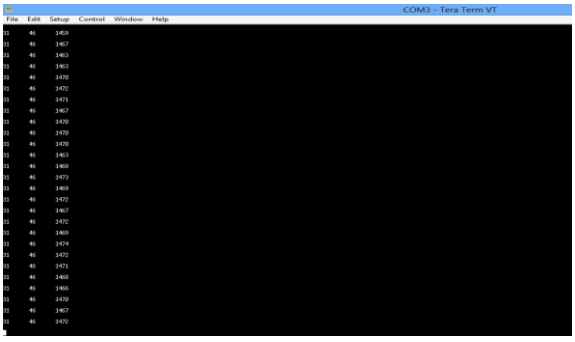
- Energia (for writing the code)
- Teraterm (External serial monitor) • Weka Tool(for graphs)

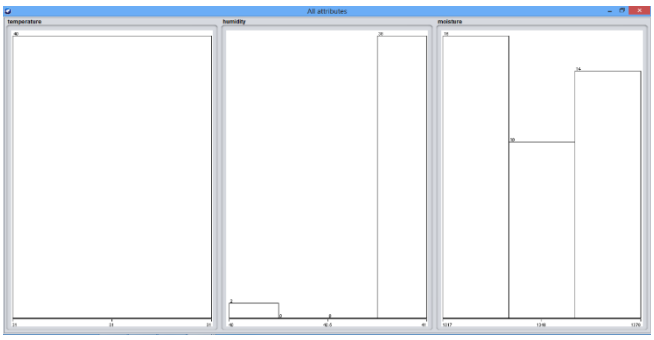
APPLICATIONS: This application is mainly used in agriculture field.

COURSES APPLIED: IOT, Data Mining

IMAGE OF THE PROJECT







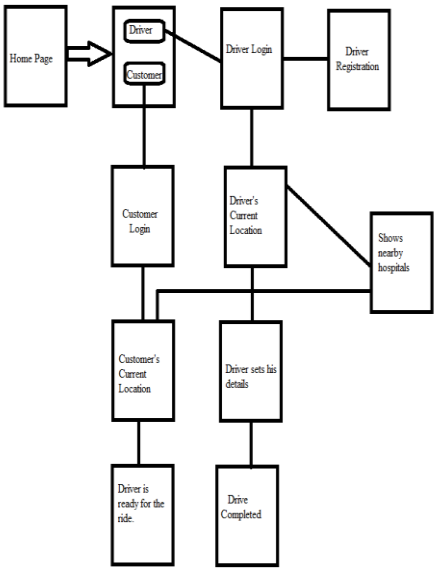
RESCUE WAGON

PROJECT ID : 2451-16-737-058.067.071.
GUIDE : Muninder (Assistant Professor)
DEPARTMENT : Information Technology

ABSTRACT : The project presents a noble method of saving human life that provides people a fast and reliable service in case of emergencies as well as providesemployment for underemployed people. The application is both executive at emergency helpline and user's on the other hand on application client interface. The application delivers a service by providing an ambulance on time which minimizes the average time when compared to other local ambulance services. The application gives the real time updated location of both driver and customers using GPS. In addition, the customer can set a destination by viewing nearly hospitals. The application also contains the details of particular hospital and doctors information which are used for general purpose.

TECHNOLOGY USED : Firebase Real Time Database , Android Studio , JAVA SE 11(18.9 LTS) for development and testing.

FUNCTIONAL BLOCK DIAGRAM :

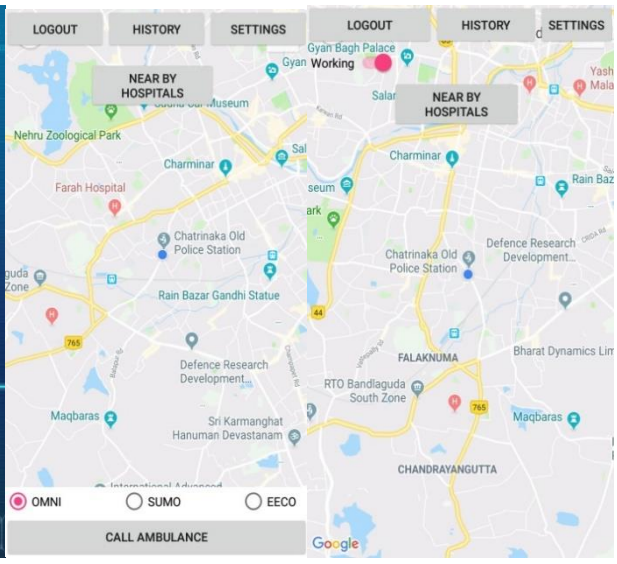


APPLICATIONS :

- It is a free Service.
- Easy way of booking ambulance within 5-10 km radius.
- Can search nearby hospitals and track the route with latitude and longitude.
- Arrival of fast ambulance in case of emergencies can save the life of people.

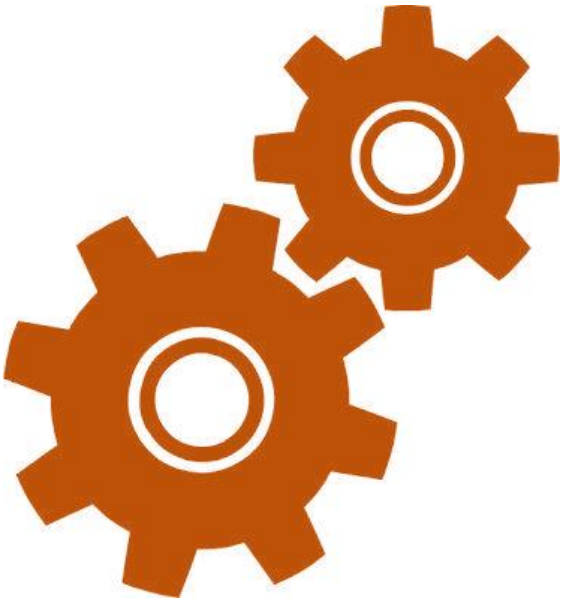
COURSES APPLIED : Java, Database management systems, Google Maps.

IMAGE OF THE PRODUCT :



DEPARTMENT OF

MECHANICAL ENGINEERING



DEPARTMENT OF MECHANICAL ENGINEERING

VISION

To impart education of highest standards that will prepare students for productive careers as competent professionals in Mechanical Engineering, and for higher studies and research.

MISSION

The department strives to provide the engineering foundation as well as professional, innovative and leadership skills to the students through the following activities:

- Lay sound foundation in the areas of mechanics, design, thermal sciences and production processes, as well as allied engineering areas.
- Enrich the undergraduate experience through experimental learning, and fostering a personalized and supportive environment that makes learning joyful and stimulating
- Encourage design and development of mechanical engineering components and systems to meet specific needs.
- Provide opportunities to develop good communication skills, and to encourage creativity and entrepreneurial skills
- Create awareness in professional responsibility, ethics, global impact of engineering solutions, and of the need for life-long learning.
- Provide research and intellectual resources to address contemporary and complex problems of industry and to advance research and applications.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Mechanical Engineering is a broad discipline that incorporates skills and expertise in the areas which are essential to most sectors of industry.

Bachelors programme in Mechanical Engineering in the college is aimed at preparing graduates who will

- Establish themselves as successful professionals while working independently or in multidisciplinary teams demonstrating professional, ethical and societal responsibilities.
- Have high levels of technical competency and problem solving skills to generate innovative solutions to engineering problems.
- Continuously enhance their skills through training, independent inquiry, professional practices and / or pursuit of higher education or research.
- Advance in their careers through increased technical and managerial responsibility as well as attainment of leadership positions.

Department of Mechanical Department

PROJECT TITLES

S. No	Project title
1	Automated machines for bio-degradable natural fiber extractions
2	Water less air cooler
3	Asubscale physical model of a 4-ton truck composite ladder type chassis
4	Design and fabrication of experimental set up for super plastic forming of light alloys at elevated temperatures
5	Design and fabrication of low-cost die set up assembly for super plastic forming of light alloys
6	Experimental verification of transverse vibrations on free free beam
7	Design and fabrication of plastic bottle (LDPE & HDPE) shredding machine
8	Arecanut spadix climbing machine and pesticides spraying machine
9	Design and fabrication of coconut de-husking machine
10	Experimental investigation of heat transfer in air cooled compact heat exchanger
11	Performance analysis of vapour compression refrigeration system using non-particles (TIO2-CUO) with refrigerant R600A
12	Design frabrication and analysis of solar concentrating still
13	Experimental investigation on biomass gasification to process municipal solid waste
14	Development and behaviour of Kevlar reinforce nano (filler) laminate hybrid composite

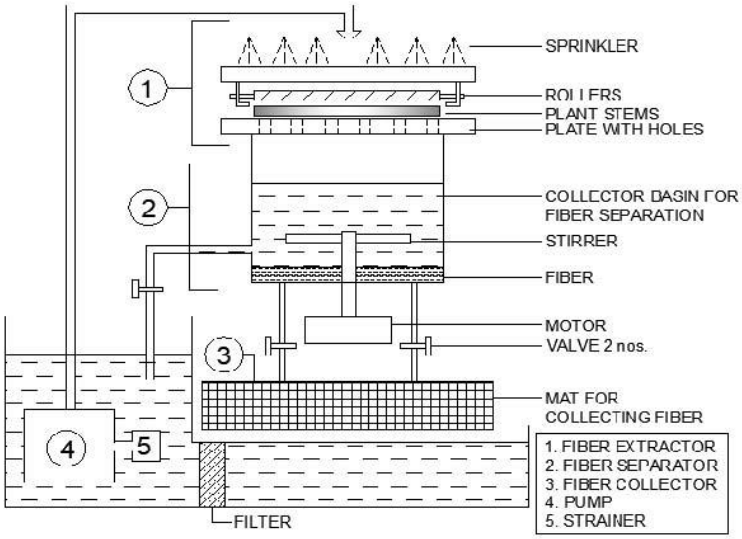
AUTOMATED MACHINE FOR BIO-DEGRADABLE NATURAL FIBER EXTRACTION

PRINCIPAL INVESTIGATOR: Dr.M.Madhavi
CO- PRINCIPAL INVESTIGATORS: Mr.V.Nikhil Murthy, Assistant Professor &
P.Soumya, PG Student-(2451-16-765-006)

SPONSORS: Institute of Engineers (India)- Research Grant (Patent Pending)

Natural fibers such as Calotropis procera, jute, Sisal offer such benefits as reductions in weight cost and CO2 and the added benefit that these fiber sources are green or eco-friendly.

Natural fiber composites with thermoplastic and thermoset matrices have been embraced by car manufacturers and suppliers for door panels, seat backs, headliners, package trays, dash boards and interior parts.



PLANT FIBER EXTRACTOR MACHINE

Extraction of abundantly available Calotropis procera and other plant stems possessing rich natural fibers is a serious problem to be addressed by engineers. Extraction of plant fibers at faster rate using automated machine is the aim of this project.

OBJECTIVE: Design and Fabrication of a device / equipment for extraction of the bio-degradable natural fibers based on Calotropis procera or any stem based plant rich in natural fibers. The major operations involved are mechanism for fiber extraction from stems, Separations of pulp from fibers, Collection of Fibers.

WATERLESS AIRCOOLER

PROJECT ID: 2451-15-736-090, 118,021,119
GUIDE: Dr. M. Madhavi, Mr. S. Ramanathan, Mr. S. Siva Kumar.
DEPARTMENT: MECHANICAL ENGINEERING

THEORETICAL BACKGROUND: Water scarcity continues to increase around the world. According to the United Nations some 700 million people in 43 countries suffer this calamity caused by overexploitation of water resources and the irrigation of agricultural lands to enhance production when rainfall is scarce. A Mexican scientist Sergio Jesús Rico Velasco from the Instituto Politécnico Nacional invented "Solid Rain" and founded the company "Silos de Agua" in 2002 to commercialize his product. The magic of "solid rain", a compound based on potassium acrylate, is that it can store 300 times, even 500 times its own weight in water without causing any harm to the environment, nor triggering toxic chemical reactions regardless of the type of soil substrate. This material is used in agriculture.

ABSTRACT: Polymers consist of molecules having high molar masses and consist of a large number of repeating units. Polymers are formed by chemical reactions containing monomers which are joined sequentially, forming a chain. Super absorbent polymers (SAP) and Hydrogels are water-absorbing and water-holding materials. Superabsorbent materials have many characteristics and due to this very reason they are mostly used in the manufacturing of many household items all over the globe. Some of them include baby diapers, adult incontinence products, feminine hygiene products, paper towels, surgical sponges, and many more. The aim of the project is to develop a waterless air cooler using potassium acrylate. The characteristic of this material is it is innocuous and can sop up water and release water time after time. The waterless air coolers consumes negligible amount of water and less power consumption compared to conventional air coolers.

SPECIFICATIONS OF CONVENTIONAL AIR COOLER:

1. Tank capacity in liters: 25
2. Cooling area in sqft : 150
3. Air delivery in m3/h : 1050
4. Motor in rpm : 1330
5. Input power in Watts : 120
6. Pump Capacity : 0.05HP & 30lpm

SPECIFICATIONS OF WATERLESS AIR COOLER:

1. Tank capacity in liters: NIL
2. Cooling area in sqft: 150
3. Air delivery in m3/h: 1050
4. Motor in rpm: 1330
5. Input power in Watts: 100
6. Pump Capacity: NIL

COURSES APPLIED: Heat transfer, Thermal Engineering.

A SUBSCALE PHYSICAL MODEL OF A 4-TON TRUCK COMPOSITE LADDER TYPE CHASSIS

PROJECT ID: 2451-15-736-043, 044, 047.
GUIDE: Dr.M.Madhavi
DEPARTMENT: Mechanical Engineering
ABSTRACT:

- Chassis is a major component of a vehicle system. The chassis of an automobile acts as a skeleton on which the engine, wheels, axle assemblies, brakes, suspensions etc. are mounted. The chassis receives the reaction forces of the wheels during acceleration and braking and absorbs aerodynamic wind forces and road shocks through suspension. The type of chassis used in the project is ladder frame chassis.
- In the present work Pultruded E-glass/Epoxy C-section Composite frames are used for the development of ladder type Chassis.
- The objective is to design and develop a subscale model of a 4-Ton truck composite ladder type chassis.
- Design Specifications of 4-Ton Truck Chassis: Total length = 6436.2 mm; Width = 858.52 mm; Height of main member = 215.90 mm; Thickness of main member = 7 mm; Height of cross member = 195.9 mm; Thickness of cross member = 6 mm.
- SUB-SCALED CHASSIS: Total length = 1244.91 mm; Width = 166.05 mm; Height of main member = 41.76 mm; Thickness of main member = 1.35 mm; Height of cross member =37.89 mm; Thickness of cross member = 1.16 mm.

PROCESS METHODOLOGY:

- Pultrusion
- Machining.

APPLICATIONS:

- Used in Automobiles

COURSES USED:

- Automobile Engineering
- Composite Materials
- Design & Manufacturing

3-D model of Composite Chassis

DESIGN AND FABRICATION OF EXPERIMENTAL SET UP FOR SUPER PLASTIC FORMING OF LIGHT ALLOYS AT ELEVATED TEMPERATURES

PROJECT ID: 2451-16-765-011, 012
PRINCIPAL INVESTIGATOR: Dr. J Kandasamy, Professor
SPONSORED BY: UGC, SERO. No.F MRP-6742/16 (SERO/UGC)
DEPARTMENT: Mechanical Engineering
TECHNOLOGY USED: Super Plastic Forming (SPF)

ABSTRACT: Superplasticity is a unique material property by which a polycrystalline material exhibits very high tensile elongation in all directions prior to failure. The project presents the design and fabrication of a test facility for manufacture of near neat shape forming of light weight alloys. The difficult-to-form alloys at room temperature like Titanium, Magnesium could easily be formed by Super Plastic Forming process in the fabricated test facility. Different shapes could be formed in the superplastic temperature range of the alloy that exhibits exceptional ductility for the gas pressure applied. Applications: Defence, Automotive, Aerospace.

IMAGE OF THE PRODUCT

DESIGN AND FABRICATION OF LOW-COST DIE SET UP ASSEMBLY FOR SUPER PLASTIC FORMING OF LIGHT ALLOYS

PROJECT ID: 2451-15-736-117, 314, 318
PRINCIPAL INVESTIGATOR: Dr. J Kandasamy, Professor
SPONSORED BY: Institute of Engineers, IEI R & D Grant-in-aid Scheme, RDUG2018029
DEPARTMENT: Mechanical Engineering
TECHNOLOGY USED: Super Plastic Forming (SPF)

ABSTRACT: Superplasticity is a unique material property by which a polycrystalline material exhibits very high tensile elongation in all directions prior to failure. The project presents the low cost die set up assembly for superplastic forming of light alloys like Lead-Tin in room temperature. This set up helps in understanding the forming behavior of the material by the displaced air volume being exhausted from the gas blow forming bottom die. The volume formed inside the die could be easily observed by the displaced air volume measured in the inverted flask.
APPLICATIONS: Defence, Automotive, Aerospace
COURSES APPLIED: Manufacturing
IMAGE OF THE PRODUCT

EXPERIMENTAL VERIFICATION OF TRANSVERSE VIBRATIONS ON FREE-FREE BEAM

PROJECT ID: 2451-15-736-071, 083, 087
GUIDE: A. Syam Prasad
DEPARTMENT: Mechanical Engineering

INTRODUCTION: Transverse vibrations or bending vibrations are the vibrations in which the element moves to-and-fro in a direction perpendicular to the direction of the advance of the wave. System performance decreases due to vibrations. Therefore, it is required to understand the vibration pattern of structures, which is a function of natural frequencies as well as mode-shapes. Such understanding is must for developing a good design. Mode-shapes helps us in understanding the way in which is structure is going to vibrate when put under free or forced vibrations. In real life aero-planes, missiles, rockets, space vehicles, satellites, submarines etc. are modelled as free–free mechanical systems (continuous systems).

ABSTRACT: The aim of the present work is to develop an experimental setup which is suitable for the laboratory experiment as it lays the foundation for investigating the vibrational analysis of a free - free beam at different modes of frequencies. In this experiment the shaker will excite the beam vertically at one corner so that it is possible to see transverse vibration modes along with torsional vibration modes also. Transverse and torsional natural frequencies of steel and aluminium beams are calculated theoretically and will be validated with Experimental values.

TECHNOLOGY USED: Vibration exciter setup excites the beam.

APPLICATION: On performing vibrational analysis on free-free beam the vibrational behavior of the beam can be understood. Considering two different beams with different material, it paves way for selection of material s with high first natural frequency in aircrafts, automotive, machinery etc where vibration may lead to damage and failure.

COURSES APPLIED: Dynamics of machines, Mechanical Vibrations (to study the vibrational behavior theoretically). Machine design (Beam, Spring Design)

IMAGE OF THE PRODUCT:

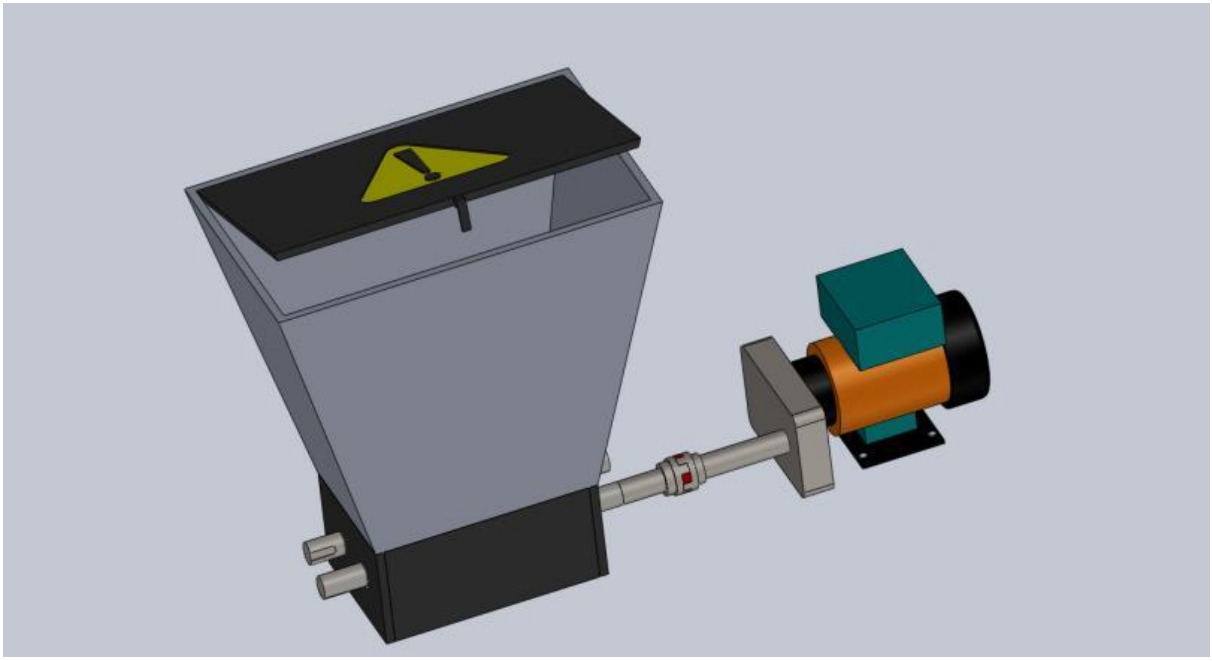
DESIGN AND FABRICATION OF PLASTIC BOTTLE (LDPE & HDPE) SHREDDING MACHINE

PROJECT ID: 2451-15-736-032,51,57,58
GUIDE: G. Srinivasa Sharma
DEPARTMENT: Mechanical Engineering

ABSTRACT: The available machines used to recycle this plastic are very costly. The process of packaging and transporting to the local processing plants is much costly. A cutting machine is designed to reduce large solid material objects into a smaller volume or small pieces making waste management easier reducing labour work which results in cost reduction. This project describes about the experimentation of plastic bottle cutting machine and analysis of mechanism used in machine. We are making this project model for recycling of plastic wastage in domestic area, industries.

TECHNOLOGY USED: Shredding of plastic bottles with the aid of steel blades.
APPLICATIONS: For the Shredding of used Plastic water bottles, shampoo bottles and any plastic materials of similar kind.

IMAGE OF THE PRODUCT:



ARECANUT SPADIX CLIMBING MACHINE AND PESTICIDES SPRAYING MACHINE

PROJECT ID: 2451-15-736-016,022,029
GUIDE: Dr.P.V.Durga Prasad
ABSTRACT: Arecanut is one of the foremost commercial plantations in Karnataka, Kerala and north-eastern states. Due to rapid urban migrating from last decade, there is scarcity of labour for areca nut cultivation which is a labor-intensive process. During the time of yield, the Areca nut spadix is cut by climbing the tree by skilled labors who have been doing this work for generations. Now the future generations have migrated to cities and this has resulted in lack of labour which is a concern to Areca nut cultivators. During the time of any rainy season, Pesticide is sprayed to the spadix. This is done 3-4 times a year depending on the geographical location. This process has also been affected due to scarcity of labour and has results in crop loss. All these problems suggest that mechanization of Areca nut spadix climbing is imperative.

TECHNOLOGIES USED:

- SolidWorks, Ansys for design and analysis and welding.

APPLICATIONS:

- It is used to climb tall trees and spray pesticides for tall trees.
- It can be used in remote areas as it is portable.

COURSES APPLIED:

- Kinematics of machines.
- Dynamics of machines.
- Electrical Circuits and Machines.
- Metallurgy and material science.

RESULTS:

This design concept of one such machine which will help in climbing and spraying pesticide to the spadix. Such a machine will end the worries of farmers who have been relying on fast diminishing skilled labours who can climb areca nut trees. It can reduce 75% of labour cost. Easy maintenance and Efficient Spraying.

DESIGN AND FABRICATION OF COCONUT DE-HUSKING MACHINE

PROJECT ID: 2451-15-736-033, 046, 010.
GUIDE: Dr P. V. Durga Prasad
DEPARTMENT: Mechanical Engineering

ABSTRACT: The main objective of this machine is to remove the coconut shell and to eliminate the skilled labour involved in de-husking. The coconut outer shell is a fibrous husk one to two inches thick and we deal with the design and fabrication of pneumatic operated coconut de-husking machine. This project is aimed at producing an efficient and more economical machine for coconut industry. The coconut is known for its great versatility as seen in many domestic, commercial, and industrial uses of its different parts. One traditional method used for coconut de-husking is using a machete. This is done by using human energy. Hence an alternative is suggested in our project which reduces time involved in coconut de-husking and human effort. Depending upon the survey different sizes of coconut are determined. The machine is designed to accommodate different sizes of the coconut that are cultivated anywhere in the world.

TECHNOLOGIES USED:

- Sheet metal cutting
- Welding Machines (MIG or TIG)
- Pneumatics system and compressor
- CNC cutting

APPLICATIONS:

These types of pneumatic coconut husk remover can be extensively used in the fields like Industrial canteens, Agriculture purposes, Hair oil refinery industries, Coir and Fuel industries, Gunny bag industries,

COURSES APPLIED:

- Machine Tool Engineering, Manufacturing Processes
- Metrology & Instrumentation, Metallurgy & Material science

RESULTS:

Successfully designed and fabricated to accommodate different sizes of the coconut that are cultivated in coconut fields.

EXPERIMENTAL INVESTIGATION OF HEAT TRANSFER IN AIR COOLED COMPACT HEAT EXCHANGER

PROJECT ID: 2451-15-736-080.096.115
GUIDE: M. Bhargava Chandra
DEPARTMENT: Mechanical Engineering

ABSTRACT: The project entitled Experimental Investigation of Heat transfer in Air Cooled Compact Heat Exchanger aims at thermal design and construction of miniature air cooled heat exchanger test setup. As there are is a need of compact heat exchangers in industries now a days due to space constraints, the reduction in size of heat exchanger is possible without sacrificing the performance. Many techniques are available for enhancing heat transfer rate of heat exchangers out of which internal argumentation by tube inserts is one. This project aims at studying the heat transfer rates with and without inserts for comparison and to arrive at the possible rate of enhancement and hence possible reduction in heat exchanger size to be extrapolated to the actual heat exchangers.

TECHNOLOGIES USED:
- Solid Works and Ansys for design and analysis.
- Hydraulic systems

APPLICATIONS:
- In all industries like power plants, paper mills, dairy industries etc

COURSES APPLIED:
- Heat Transfer
- Hydraulic Machinery.
- Principle of electrical engineering.

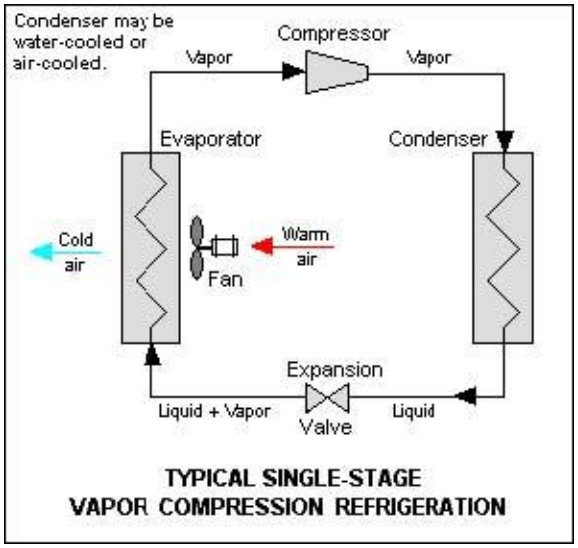
RESULT:
- Manufacture of heat exchanger test setup.
- Manufacture of different types of profiles of tube inserts
- Heat transfer enhancement study for different types of inserts

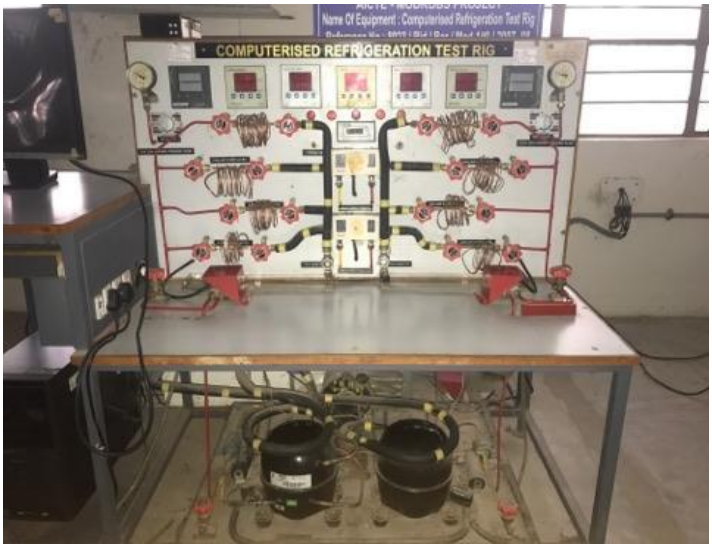
Air Cooled Heat Exchanger Test setup

PERFORMANCE ANALYSIS OF VAPOUR COMPRESSION REFRIGERATION SYSTEM USING NANO-PARTICLES (TIO2-CUO) WITH REFRIGERANT R600A.

PROJECT ID: 2451-15-736-099**,** 100**,** 323
GUIDE: Mr. Miskin Ravi Kumar
DEPARTMENT: Mechanical Engineering

ABSTRACT: For this project, an experimental work was investigated on nano refrigerant Tio2 and Cuo –R600a nano refrigerants were used in domestic refrigerator without any system reconstruction. The refrigerator performance was then investigated using energy consumption test. The results indicate that Tio2 and Cuo –R600a nano refrigerants work normally and safely in the refrigerator. The refrigerator performance was better than pure R600a system, with 9.6% less energy used with 0.5g/l Tio2 and the cooling capacity is increased by 10-20% by using Cuo – R600a nano refrigerant. Further we proceed to combine Tio2 and Cuo nano-particle and conduct the performance analysis for the same.
TECHNOLOGY USED: Vapour Compression Refrigeration
FUNCTIONAL BLOCK DIAGRAM AND IMAGE:





APPLICATIONS: Domestic and Commercial refrigeration, Food Processing and Cold Storage, Medical refrigeration.
COURSES APPLIED: Refrigeration and Air Conditioning, Heat Transfer

DESIGN, FABRICATION AND ANALYSIS OF SOLAR CONCENTRATING STILL

PROJECT ID: 2451-15-736-063, 075, 079
GUIDE: N.Yogi Manash Reddy
DEPARTMENT: Mechanical Engineering

ABSTRACT: An experimental investigation is done on solar still using fresnel lens for obtaining pure water without any conventional energy. In this experimentation renewable energy source i.e., solar energy is used for distillation process. Fresnel lens which is acts as solar concentrator is integrated to increase solar radiation eventually giving more pure water compared to conventional still.

TECHNOLOGIES USED:

- Wood cutting
- Sheet metal cutting
- Welding, Drilling
- Glass cutting

APPLICATIONS AND USES

- Water purifying

COURSES APPLIED

- Non Conventional Energy Source, Heat Transfer and Production

TESTS: To evaluate the performance of the solar still with the Fresnel lens, experiment was conducted and various parameters were observed such as temperature of water, temperature of glass cover, wind speed, humidity, angle of lens and output yield for every 30 minutes.
RESULTS: In conventional solar still, experiments were conducted for different quantities of water, different angles of stills to get the optimum output quantity of water. From this experiment it was found that the conventional still with 4 liters of water gave maximum daily still yield.

SOLAR CONCENTRATING STILL

EXPERIMENTAL INVESTIGATION ON BIOMASS GASIFICATION TO PROCESS MUNICIPAL SOLID WASTE

PROJECT ID : 2451-15-736-062,065,069.
GUIDE : R.RAVI KUMAR
DEPARTMENT : MECHANICAL ENGINEERING

ABSTRACT : At present the availability of MSW in India is huge and it is about 500 MT / day in cities like Hyderabad, Pune and Mumbai. Recent studies indicated that MSW yield is also increasing rapidly in class 2 and class 3 cities. . Earlier studies conducted by CGPL , IISc Bangalore, Center for Energy studies at IIT Delhi published the results of MSW processing for power generation, whereas the sample of MSW with wet and dry compositions are differing. With emphasis on conversion of waste to wealth project initiated by government of India , the present work focus on the existing techniques, literature and in conversion of MSW to useful producer gas in a downdraft gasifier. This producer gas is further used in producing power from either IC engine or Gas Turbines. The present work focus on implementing frame work for processing MSW to energy by biomass gasification. This project presents a theoretical model in obtaining the properties of MSW such as average density, composition, calorific value and self ignition temperature. Thermodynamic equilibrium model for estimation of gas composition is also addressed and presented for further study.

TECHNOLOGY USED : Thermal Engineering, Combustion and Gasification.
COURSES APPLIED : Welding (Production), Non conventional energy sources
APPLICATIONS : Power Generation by Syn Gas, Heating for domestic needs and IC Engines

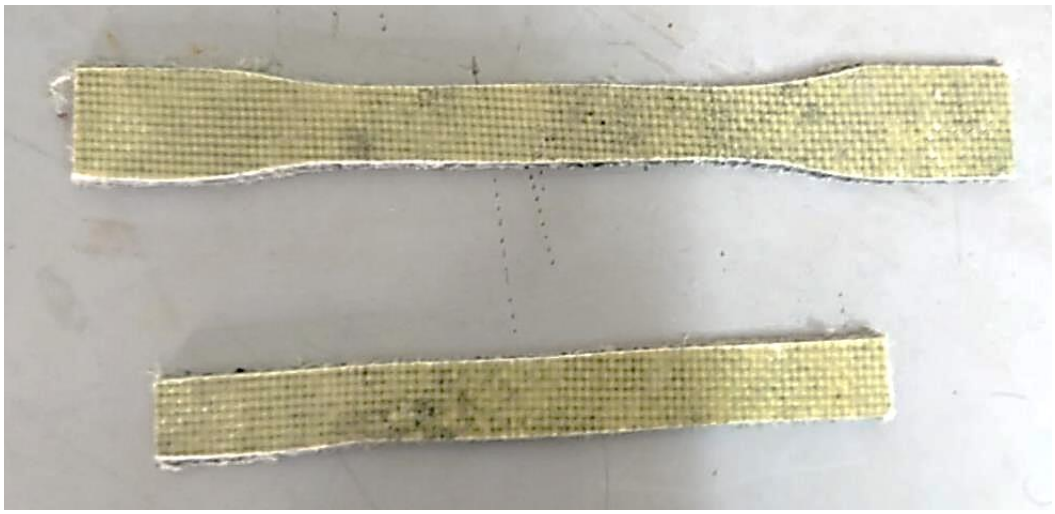
IMAGE OF THE PRODUCT :

DEVELOPMENT AND BEHAVIOR OF KEVLAR REINFORCED NANO (FILLER) LAMINATE HYBRID COMPOSITE

PROJECT ID: 2451-17-765-005
GUIDE: V.Nikil Murthy
DEPARTMENT: Mechanical Engineering (CAD/CAM)

ABSTRACT:
The main objective of this work is to investigate the effect of additives on Tensile and Impact behavior of Kevlar Fiber fabric at laminate level to explore an alternative skin material for the outer body of aerospace applications and machines. This experimental work investigates the effect of Nano (Graphene) concentration in epoxy resin on the Tensile and Impact properties of Kevlar fiber laminate of 4 mm thickness. The laminate had been prepared by using hand lay-up method and test has been conducted on it. Various Tensile and Impact properties values obtained from experimentation have been compared for Kevlar fiber laminate composites of three different concentrations were fabricated by adding the Nano (Graphene) powder to resin bath. The effect of Nano (Graphene) concentration variation (3%, 6% and 9%) weight on the prepared material. Mechanical properties can be studied by universal testing machine (UTM). Analytical investigation of composites can be done in Autodesk fusion 360 software.

TECHNOLOGY USED: Nano composites, synthetic fibers
APPLICATIONS:
Industrial, Military Applications, Sports and personal safety equipment
COURSES APPLIED: Composites
IMAGE OF THE PRODUCT:



DEPARTMENT OF

BUSINESS MANAGEMENT

DEPARTMENT OF MBA

ABOUT MBA:

MBA programme in the college has been started in the academic year 2009-10, affiliated to OU with an intake of 60 students. The syllabus has been revised to suit the specific needs of the present business environment.

The department have committed core faculty members who are highly qualified, experienced and efficacious in their respective fields i.e. Finance, Human Resource, and Marketing. The focus of the MBA department is not only on creating conceptually sound professionals but also to take them a step further and empower them with skills to jumpstart their careers.

The department has well equipped information technology laboratory with 30 computers of latest configuration. There is separate departmental library with large collection of textbooks, reference books and National and International journals.

Guest Lectures by eminent resource persons on emerging issues in various functional areas of management are organized to provide greater insight into student's learning. English Language Training is imparted to students during the first semester. Personality and Communication skills development training programs are organized regularly during the course.

All round development of students was ensured through various co-curricular activities like student paper presentations, group discussions, business quiz, case study etc., which were organized throughout the course.

Academic performance of students has been consistently good and most of them are successfully placed with various organizations.

VISION:

To Impart management education, Producing Competent, Confidence managers and Entrepreneurs.

MISSION:

- To Impart Managerial knowledge and skill set to students.
- To produce managers and entrepreneurs who will be future ready and socially responsible.
- To conduct various Personality Development Programmes to improve their Creativity, Decision Making and
- skill set.
- To inculcate culture of team work and leadership qualities for achieving excellence in every walk of life

Department of Business Management

PROJECT TITLES

S. No	Project title
1	A study on motivation level of employees in BDL, Hyderabad
2	A study on NPA's with reference to SBI and HDFC
3	Asset liability management of SBI
4	A study on employee engagement in it sector
5	A study on performance appraisal system with special reference to dairy industry
6	Foreign exchange rate determination and analysis
7	A study on financial performance analysis of Bharat dynamic limited by using z-score
8	Impact of promotional strategies on brand awareness on heritage products at heritage, Uppal.
9	A study on retailer's purchase behaviour of gold jewellery in Hyderabad at Rajiv jewellers
10	Corporate social responsibility of reliance industries limited

A STUDY ON MOTIVATION LEVEL OF EMPLOYEES IN BDL, HYDERABAD

PROJECT ID : Aditi Mishra 2451-17-672-038
SPECIALIZATION : Human Resources
GUIDE : K. Sri Divya
DEPARTMENT : Department of Business Management

ABSTRACT:

Motivation is a driving force that impels an employee to work. Whatever may be the behaviour of man, there is some stimulus behind it. Stimulus is dependent upon the motive of the person concerned. Motive can be known by studying his needs and desires. According to Edwin B Flippo, "**Motivation is the process of attempting to influence others to do their work through the possibility of gain or reward**."

The objectives of the study are:

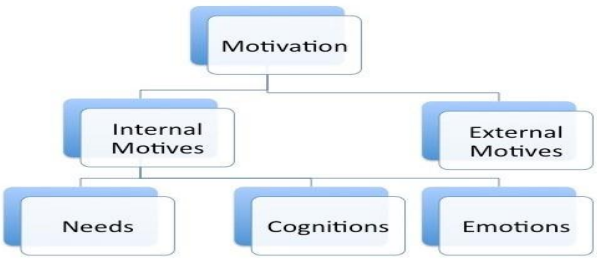
- **To study the factors affecting motivation levels in BDL.**
- **To analyze the effect of monetary and non-monetary benefits on motivation levels.**
- **To understand how spirituality affects their attitudes and contributes to the growth of the organization.**
- **To summarize the suggestions for developing more effective motivation strategies.**

TECHNIQUES OF ANALYSIS: Correlation technique is used to study and analyse the relationship among the various factors of motivation.

FINDINGS:

- **The study reveals that 'Work Culture' of the organization highly motivates them.**
- **The employees agree that a more transparent performance appraisal system can help them to perform better.**
- **Most of the employees also agree that incorporation of spiritual programs can boost their efficiency at their workplace.**

FLOWCHART:



A STUDY ON NPAs WITH REFERENCE TO SBI AND HDFC

PROJECT ID : K. Sushmitha, 2451-17-672-044
GUIDE : Dr. Rama Devi
SPECIALIZATION : MBA (Finance)
DEPARTMENT : Department of Business Management

ABSTRACT:

Maintaining asset quality and profitability are critical for banks survival and growth. In the process of achieving such objectives, a major roadblock to banking sector is prevalence of Non-Performing Assets (NPA). The study is undertaken to find out the impact of NPAs on selected banks SBI and HDFC which has higher NPAs (Public/Private sector banks), causes and control measures for rising NPAs.

OBJECTIVES

- To understand the concept of NPAs
- To study the NPAs of Indian banking sector
- To study and evaluate NPAs of select banks, SBI and HDFC
- To appraise the recovery mechanism followed HDFC and SBI

TOOLS OF DATA ANALYSIS:

Ratio Analysis is the technique that is used to obtain a quick indication of a firm's financial performance in several key areas. The ratios used for analysis of NPAs as GNPA and NNPA Ratios.

The other Statistical tools for data analysis applied are Arithmetic Mean, Standard Deviation, Correlation, Pie diagrams and Bar charts are done to compare the ratios of five financial years & interpret the analysis of the same.

FINDINGS :

- In the case of Gross NPA, performance of private sector bank- HDFC is doing better as compared to Public sector bank –SBI bank.
- In case of Net NPA also, performance of HDFC is observed to be improving over the years and hence creation of less non- performing assets as compared to HDFC bank. Percentage net NPA for SBI Bank is observed to be continuously rising.
- The coefficient of correlation for SBI was found to be -0.94738 that is high negative correlation between net profit and net NPA of the bank, which indicates that an increase in NPA, will decrease the net profit.
- Similarly, coefficient of correlation for HDFC bank was 0.726756 that is positive correlation between net profit and net NPA.
- Due to mismanagement in bank there is a positive relation between Total Advances, Net Profits and NPA of bank which is not good. There is an adverse effect on the Liquidity of the bank.
- Bank is unable to give loans to the new customers due to lack of funds which arises due to NPAs. As per the government, the main reasons for rise in NPAs are sluggishness in the domestic growth in the recent past, slow recovery in the global economy and continuing uncertainty in global markets leading to lower exports of various products such as textiles and leather.

ASSET LIABILITY MANAGEMENT OF SBI

PROJECT ID : Venu Gopal, 2451-17-672-043
SPECIALIZATION : FINANCE
GUIDE : M Jyothi Prasad
DEPARTMENT : Department of Business Management

ABSTRACT:

Assets & Liabilities Management (ALM) is a process of planning, organizing, coordinating and controlling the assets and liabilities – their mixes, volumes, maturities, yields and costs in order to achieve a specified Net Interest Income. As all transactions of the banks revolve around raising and deploying the funds, ALM gains more significance as an initiative towards the risk management practices by the Indian banks. As mismatch in the maturity profile of assets and liabilities exposes the balance sheet to liquidity risk, so liquidity risk is an important dimension of ALM. This study deals with maturity mismatches between the assets and liabilities & its analysis through **GAP analysis** technique, and the study is on State Bank of India (SBI).
The **State Bank of India** (**SBI**) is an Indian multinational & public Sector bank.

The objective of the study is

- To understand the concept of ALM and
- Analysis of structural liquidity statement of SBI.

TECHNIQUES OF ANALYSIS:

The analysis of structural liquidity is made through GAP analysis. Gap analysis measures mismatches between rate sensitive liabilities and rate sensitive assets (including off-balance sheet positions). The Gap Report should be generated by grouping rate sensitive liabilities, assets and off-balance sheet positions into time buckets according to residual maturity or next re-pricing period, whichever is earlier. The difficult task in Gap analysis is determining rate sensitivity. Through this analysis positive and negative mismatches are identified.

Formula is $GAP(t) = RSA(t)-RSL(t)$

i. RSA means those assets which are mature or re-price in a given time period (t)
ii. RSL means those liabilities which are mature or re-price in a given time period (t)

FINDINGS:

- ✓ It is found that the performance of the bank in the long run is satisfactory as there is a positive mismatch.
- ✓ There is more negative mismatches during the various periods within 1year in my three years study.
- ✓ The amount of investments for three years is very low when compared to borrowings
- ✓ There are more foreign currency assets than foreign currency liabilities for three years which shows the good performance of the bank.

A study on Employee Engagement in IT Sector

PROJECT ID : Santhoshi deepa , 245117672004
SPECIALIZATION : Human Resources
GUIDE : K.Sri Divya
DEPARTMENT : Department of Business Management

ABSTRACT:
Employee engagement is the fundamental concept in effort to understand and describe the nature of relationship between organization and its employees. Employees who are engaged in their work &committed to organization give companies crucial advantage including higher profitability and low employee turnover. Employee motivation is a critical aspect at work place which lead to performance of department and company as well. The research is conducted in IT based industries to know the relationship between employee engagement and employee motivation.

OBJECTIVES OF THE STUDY:

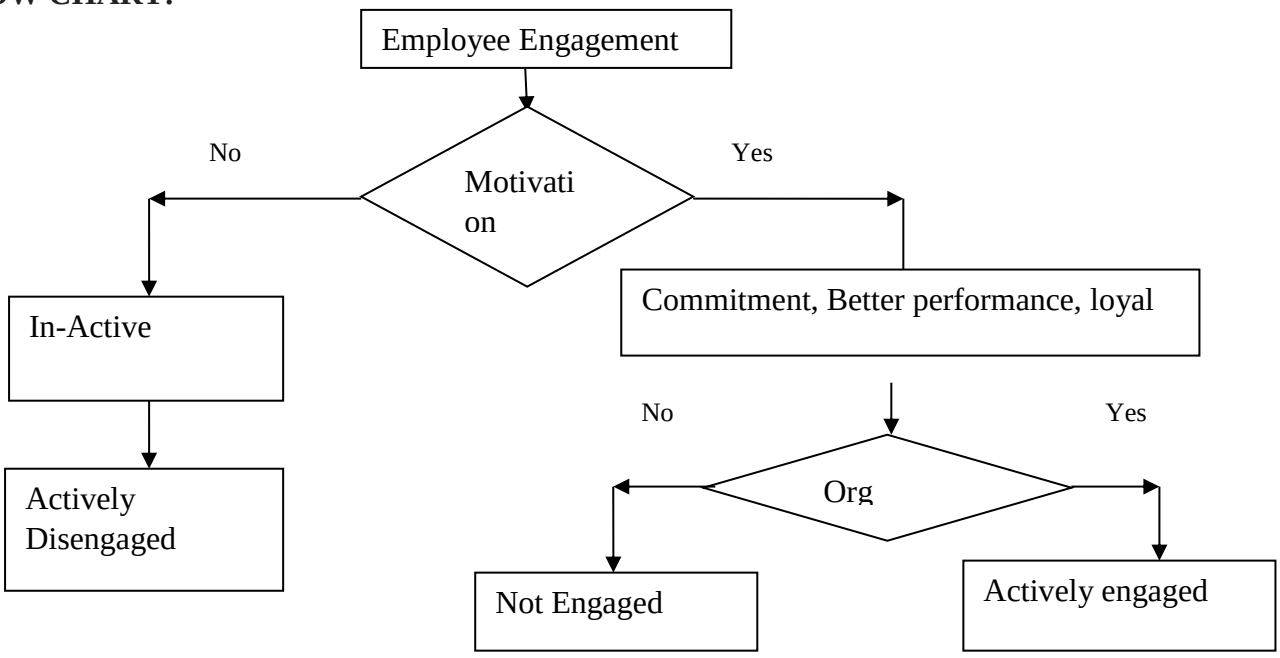
- To Study current levels of employee engagement and employee motivation.
- To Analyze the impact of employee motivation on employee engagement in companies like TCS, Wipro and Infosys which tends to be leader of IT industry.

TECHINIQUES OF ANALYSIS: Statistical tools like Chi square are used to analyse.

FINDINGS: The findings of the study show a clear evidence of

- Promotion of work life balance in a better way from employers side would build a mutual trust of understanding between the two
- Employees who are looking for job change or who may look change are either dis-satisfied with relationship with manager or dissatisfied with HR support from organization
- Work life balance, working environment, interpersonal relationships are major motivational factors to perform better.

FLOW CHART:



A STUDY ON PERFORMANCE APPRAISAL SYSTEM WITH SPECIAL REFERENCE TO DAIRY INDUSTRY

PROJECT ID : Navya Sree, 2451-15-672-026.
SPECIALIZATION : Human Resources.
GUIDE : B. Menaka.
DEPARTMENT : Department of Business Management

ABSTRACT: A Performance Appraisal is a review and discussion of an employee's performance of assigned duties and responsibilities. Dairy industry plays a dynamic role in India agro–based economy in producing various classified dairy products and serving to the market at their daily needs.HR managers need to address the issues in dairy industry by successfully developing an effective performance appraisal system in order to take administrative decisions. So the study have undergone past literatures to understand the imperatives of performance appraisal system and found that performance appraisal system is one of the important factors of organizational ability which is the main mark of the current study.

OBJECTIVES:

1) To study the existing practices of performance appraisal system at Telangana State Dairy Development Cooperation and Federation Limited (TSDDCF).

2) To assess the employee's perceptions towards the design and practice of performance appraisal system.

3) To study the demographics influence on performance appraisal system.

4) To present the relationship between performance appraisal system, performance appraisal system design & practice and evaluation process.

TECHNIQUES OF ANALYSIS: SPSS16.0, descriptive statistics to present the frequencies, ANOVA, Correlation and Regression.

FINDINGS: The performance appraisal method followed in the organization was grading method which includes "self-appraisal", "potential appraisal" and "performance appraisal".

During the study it was observed that all employees were satisfied with the prevailing performance appraisal system. It is found that there is no link between pay and performance in the organization.

Demographic wise salary is influencing performance appraisal system design &practice.

It is found that performance appraisal system and performance appraisal design& practice, evaluation processes are dependent variables.

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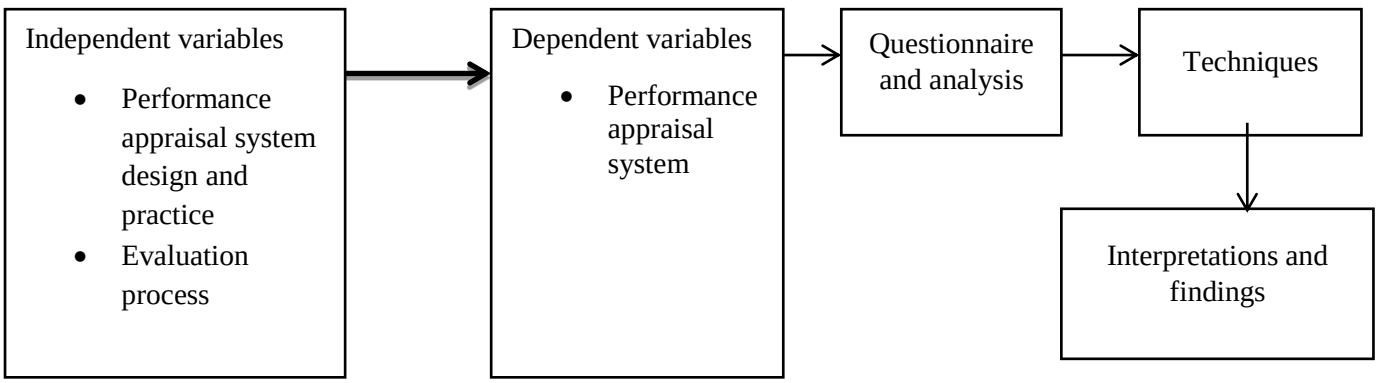


Foreign Exchange Rate Determination and Analysis

PROJECT ID : Chandra Shekar, 2451-17-672-001
SPECIALIZATION : Finance
GUIDE : Dr. N.Sravanthi
DEPARTMENT : Department of Business Management

ABSTRACT:

A foreign exchange rate is the price of the domestic currency stated in terms of another currency. In other words, foreign exchange rate compares one currency with another to show their values. Foreign exchange rate determination is the process of forecasting future exchange rate and estimating possible future fluctuations in currency exchange rates and is very important as exchange rates have a huge impact on the economy of the country.

Foreign exchange rate is determined by many factors like supply and demand, balance of payments, interest rates, inflation rate terms of trade political stability recession, speculation and have influence on the exchange rates.

OBJECTIVES OF THE STUDY :

- **To discuss the process of foreign exchange rate determination and factors affecting the currency exchange rates.**
- **To analyze the exchange rates between US dollar and Indian rupee for the period 2016-2018.**
- **To find out reasons for fluctuations in exchange rates of US dollar and Indian rupee for the period 2016-2018**

TECHINIQUES OF ANALYSIS : The data is analyzed by using tables, graphs, and charts and statistical tools such as mean, range, Standard Deviation etc.,

FINDINGS: The study revealed that on oct 9, 2018, rupee dived to a new historic low, ending at Rs74.34 to the dollar and finally settled at Rs 69.453. In this calendar year alone rupee value has eroded 10% against the US dollar. The reasons for

1. Increase in the price of the crude oil along with increase in daily fuel demand of India from 93000 barrel to 190000 barrels in 2018 leads to huge increase in import bills as India imports nearly 80% of its fuel needs from other countries and is the third largest importer of the crude oil after USA and China.
2. Indian merchandise trade deficit is $ 157 billion in 2017-2018 and is 45% increase over previous financial year i.e., 2016-2017.
3. Foreign portfolio investors have pulled out nearly Rs.48000 crore from Indian capital markets in the first six months of 2018 making it the fastest outflow in a decade.
4. Amid political uncertainty, foreign investors are pulling are pulling out their money from Indian market.
5. Hostile economic policy of USA towards other countries is another reason for rupee depreciation.

A Study on Financial Performance Analysis of Bharat Dynamic Limited by using Z-Score

PROJECT ID : P.Ashwini, 2451-17-672-058
SPECIALIZATION : Finance
GUIDE : Dr. N. Sravanthi.
DEPARTMENT : Department of Business Management

ABSTRACT:

Financial performance analysis refers to the process of determining financial strength and weakness of the firm by establishing relationship between items of the balance sheet, profit and loss account. The Researcher has attempted to analyze the financial performance of Indian information technology manufacturing companies by using Z score model is developed by Altman in 1968. It is based on five financial ratios that can calculate from data found on a company's annual report from 2015-18.

The method to predict the company condition by combining several Ratios in **BDL.** The study concludes the overall financial health of company is in healthy zone is (1.8 to 2.99) below (1.8) not healthy more than (3.0)too healthy.

Z = 1.2(x1) + 1.4(x2) + 3.3(x3) +0.6(x4) +1.0(x5)

X1 = retained earnings/total assets,
X 3 = earnings before interest and tax4es /total assets,
X4= market value equity /book value of total liabilities,
X5= sales/total assets

OBJECTIVES OF STUDY :

- To analyze the performance of company by establishing relationship between the items of balance sheet and the profit and loss account through Z score.
- To measure the financial performance of BDL through Z score from 2015-18.
- To forecast the future prospects of the BDL.

CALCULATION OF Z SCORE:

VALUE AND COEFFICIENTS OF Z SCORE

year	1.2x1	1.4x2	3.3x3	0.6x4	1.0x5	Z SCORE
2015-16	0.245219	0.455577	0.287127	0.657652	0.426062	**2.071636**
2016-17	0.224793	0.234028	0.316155	0.515641	0.583149	**1.873766**
2017-18	0.197445	0.036439	0.387007	0.68701	0.695262	**2.003164**

IV INTREPRETATION

- The calculated Z score value of BDL Company is 2.071&2.003 which is less than 3.00 so company was "Healthy" for the year 2015-18.
- The Z scores calculations indicates the sound financial health of the company.

Impact of promotional strategies on brand awareness on heritage products at Heritage, Uppal.

PROJECT ID : 2451-17-672-047, 2451-17-672-040
SPECIALIZATION : Marketing
GUIDE : S.Praveena reddy
DEPARTMENT : Department of business management

ABSTRACT:

This study focus on understanding the purchase behavior of customer towards the promotional strategies offered by Heritage brand.

PROMOTIONAL STRATEGIES: An effective promotional strategy has so many advantages. It can help a business provide the right business information, differentiate its products, increase sales, accentuate the value of their product and stabilize sales.

BRAND AWARENESS: It refers to the extent to which customers are able to recall or recognize a brand. Brand awareness is a key consideration in consumer behavior, advertising management, brand management and strategy development.

The study was conducted in Hyderabad. The primary data was collected from retail outlets and customers. Direct interview has been conducted to collect the data from 50 outlets in the areas(Kothapet, lb Nagar, Nagole, Balapur,).Online survey through goggle forms has been conducted to collect the data from sample size of 200 customers. The data was collected and analyzed through statistical test. The study was limited only to heritage uppal branch

. **OBJECTIVES OF STUDY :**

- The objective of the study is to know the impact of promotional strategy towards branding of heritage products (fresh and long shelf life).
- To increase the brand awareness of heritage products
- To improve the promotional strategies of heritage products

TECHINIQUES OF ANALYSIS:

The data is analyzed by using tables graphs and charts

HERITAGE COMPANY PROFILE:

Heritage Foods Limited is one of the largest private sector dairy enterprises in Southern India. .The Heritage Group was founded in 1992 by Shri Nara Chandrababu Naidu,. The annual turnover has crossed $200 million USD during FY 2008'09.Heritage Foods has its headquarters in Hyderabad, Telangana, India.

FINDINGS:

- Heritage has 100% recognition rate
- Heritage has 100% recall rate but it is not on the top mind of all respondents
- T.V. and newspaper are very effective means of advertisement but heritage does not do promotion by T.V.
- Only 16% of people are aware of new products produced by heritage
- Majority of respondents disagree that advertisement motivates in buying a product
- From the above survey it is clear that respondents on the whole opinion about heritage is very good

A Study on Retailer's Purchase Behaviour of Gold Jewellery in Hyderabad at Rajiv Jewellers

PROJECT ID : Dewwa Kakkr, 2451-16-672-059
SPECIALIZATION : Marketing
INTERNAL GUIDE : Mr. B. Anjan Kumar
DEPARTMENT : Department of Business Management

ABSTRACT:
This was an exploratory study, carried out to understand the purchase behaviour of the retailers in the Hyderabad, who are the wholesale customers of Rajiv Jewellers.

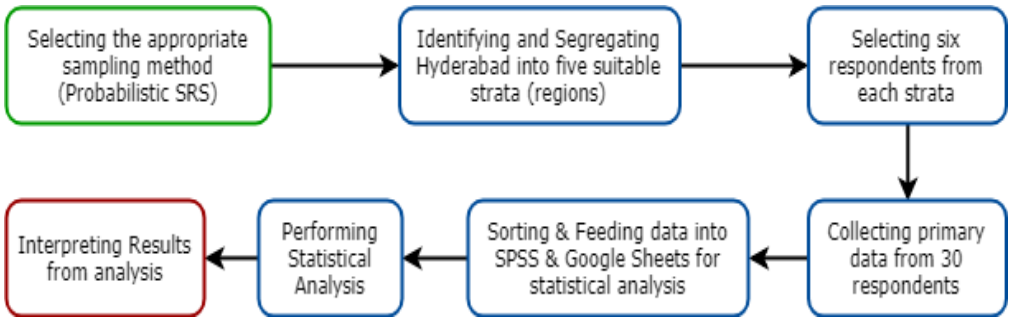
The objective of the study was to identify the area-wise purchase behaviour of retailers in Hyderabad, so as to effectively maintain sufficient quantities of stock, employ the correct product mix, and widen the customer base.

The city was divided into 5 regions (strata), and the primary data was collected through questionnaire from 30 jewellery retailers. The data was collected and analysed using different statistical methods.

The study was restricted to the Jewellery retailers of Hyderabad city, who are the direct customers of Rajiv Jewellers, and hence the result cannot be generalised for any other occasion.

TECHINIQUES OF ANALYSIS:
For the purpose of analyzing the collection of data from the various respondents, *Statistical techniques* like: *Frequency distributions and Tests of Significance* have been applied. The data was recorded using *Google Forms*, into *Google Sheets* (a spreadsheet software by Google), and prepared for analysis using both *Google Sheets* and *IBM SPSS 25* (*Statistical Packages for Social Science*).

FLOW CHART:



FINDINGS:
The results from the project gave various inputs to Rajiv Jewellers to efficiently maintain the inventory level, and also identify potential scope for market growth in future, like tapping the huge demand for pogulu.

The study helps Rajiv Jewellers understand the buying behaviour of its customers towards jewellery.

CORPORATE SOCIAL RESPONSIBILITY OF RELIANCE INDUSTRIES LIMITED

PROJECT ID : P.SRILEKHA 2451-18-672-015
SPECIALIZATION : FINANCE
GUIDE : BHARATHI GORTHI
DEPARTMENT : Department of Business Management

ABSTRACT:

Corporate Social Responsibility (CSR) is a form of business self-regulation to incorporate social and environmental concerns. It represents a business model that adheres to the laws and ethical standards. CSR has become mandatory under schedule VII(Section 135) of the Companies Act 2013. Companies coming under CSR norms are bound to spend 2% of its average net profits earned during the past three financial years towards CSR. Reliance Industries Limited is contributing to social development even before the imposition of law and has been spending more than 2% of its profits towards CSR. RIL is concentrating on health, education, rural transformation and others. The objectives of the research are to examine RIL CSR activities, analyse and compare CSR spending for three years i.e. 2014-15 to 2016-17. Research is completely based on secondary data collected from RIL annual reports, Business responsibility reports and CSR related publications.

TECHNIQUES OF ANALYSIS: The techniques used to analyse the collected data are mean, standard deviation and frequency distributions.

FLOW CHART: Data Presentation & Analysis:

Details of Expenditure	**2014-15**	**2015-16**	**2016-17**
CSR expenditure (in %)	3.58%	2.38%	2.31%
Actual CSR expenditure (Rs. in Crs.)	760.58	651.60	659.20
Prescribed CSR expenditure (Rs. in Crs.)	532.96	557.80	620.41
CSR Activities:			
Health	608	315	267
Rural transformation	127	103	138
Education	8	222	227
Sports	4	9	27
Others	4	10	15

FINDINGS:

1. The Reliance Industries CSR spending is higher than the prescribed CSR of Companies Act, 2013 which makes RIL CSR intentions a distinct one in Indian corporate sector and has emerged as the top company in CSR having spent Rs. 760 cr. in the year 2014-15.

2. Reliance Industries is the sole firm to get a perfect score in a list of Asia's best companies in terms of CSR. Only two Indian companies – Reliance Industries and ONGC have managed to make it to a list of the world's top 100 companies in terms of CSR spending on education.

Spending on Health (in Rs.)

2014-15	2015-16	2016-17
608cr	315cr	267cr

Other Novel Projects

1. Designed & Fabricated a Composite Propeller shaft of an Automobile at our college & Pvt. Industry as a UG & PG Project.

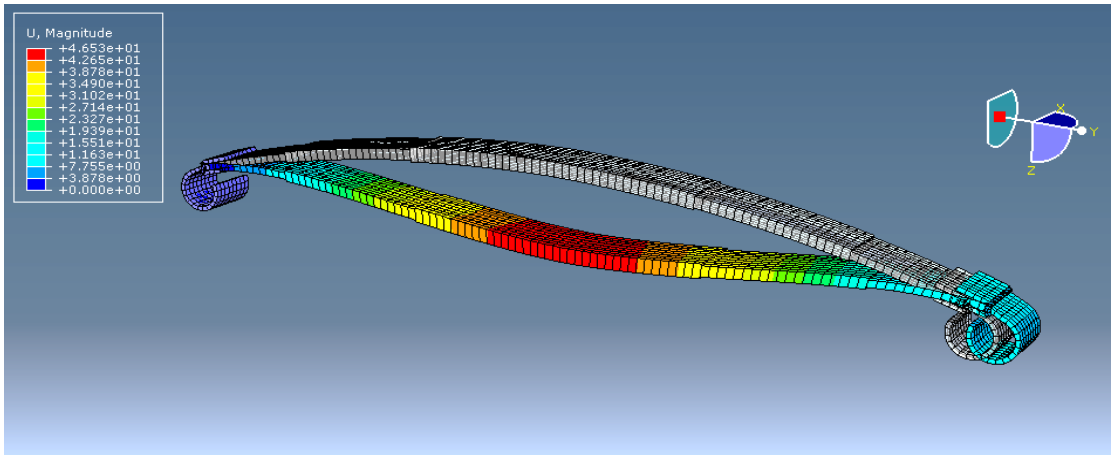
Guide: Dr. M. Madhavi

A Computer Simulated Model

Test Rig Developed at our college

2. Designed & Fabricated a Composite Mono Leaf Spring at our college as a UG & PG Project.

Guide: Dr. M. Madhavi



A

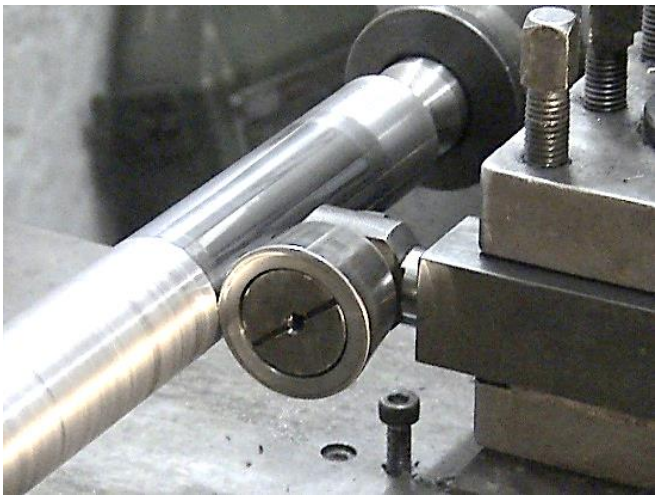
Computer Simulated Model

3. Design & Fabrication of Composite Heat Exchanger. Fabricated at MVSREC & Pvt.Industry.

Guide: Dr. M. Madhavi

4. Design and Development of Ball Burnishing Tool
Guide: Dr. J. Kandasamy

Ball Burnishing Tool



5. Design and Fabrication of Domestic Pulverizer for Bio-Degradable Wastes

Guide: T.Murali Mohan Raju

6. Design and Fabrication of Energy Recovery Ventilator Using Polypropylene Cross Flow Heat Exchanger

Guide: G. S. Sharma

7. Design and Fabrication of Surface Condenser

Guide: G. S. Sharma

8. Design and Fabrication of X-Axis Auto Feed Mechanism for Surface Grinding Machine Using Pneumatic

Guide: R. Ravi Kumar

9. Design and Fabrication of Solar Water Distillation Plant

Guide: G. S. Sharma

10.Development of Land Digging Machine for Planting Saplings

Guide: Dr. P. A. Sastry

11. Experimental Investigation of Novel Nozzle System on Horizontal Axis Wind Turbine

Guide: N. Yogi Manash Reddy

12. Experimental Investigation of Vertical Axis Wind Turbine (VAWT) With Gating System

Guide: N. Yogi Manash Reddy

13. EFFI-CYCLE 2017

Faculty Advisors: G. S. Sharma and M.Ravi kumar

14. GO-KART 2017

Faculty Advisors: G. S. Sharma and N Yogi Manash Reddy

15. EFFICYCLE 2018

15. Go-kart 2019

15. BAJA 2019

LIST OF WINNERS

S.No:	BRANCH	PRIZE	TITLE	GUIDE	ROLL NUMBER
1	Auto Mobile Engineering	First Prize	Ergonomics Of Driver Seat Of A Scooter(Activa)	M.Pandarinath	2451-16-769-307 2451-16-769-005 2451-17-769-005 2451-17-769-042 2451-17-769-011
		Second Prize	Quad Bike	M.Pandarinath	2451-17-769-046 2451-17-769-045 2451-17-769-006 2451-17-769-015
2	Civil Engineering	First Prize	Vermiculate Concerte	S. Praveen	2451-16-732-083 2451-16-732-320 2451-16-732-317 2451-16-732-019
		Second Prize	Tiles Using Waste Plastic and Aggregate	Dr.R.Sandhya Rani	2451-15-732-007 2451-15-732-022 2451-15-732-030 2451-15-732-047
3	Computer Science & Engineering	First Prize	Election using Block chain	K.Murali Krishna	2451-15-733-066 2451-15-733-116 2451-15-733-119
		Second Prize	Siamese patch based image matching	Dr.Banda Sandhya	2451-17-742-001
4	Electronics and Communication Engineering	First Prize	Air Pollution Alert System	DVSR Sesidhar	2451-15-735-024 2451-15-735-040 2451-15-735-055
		Second Prize	Autonomous Trash Detection and Collection BOT	DVSR Sesidhar	2451-15-735-061 2451-15-735-102 2451-15-735-103 2451-15-735-007 2451-15-735-008
5	Electrical and Electronics Engineering	First Prize	Design, Development and Implementation Of A Quaternion Based Three Dimensional Controller	N.Shiva Rama Krishna	2451-15-734-012 2451-15-734-002
		Second Prize	Differential, Under and Over Voltage Protection Of Single Phase Transformer	Dr.D.Venu Madhava Chary	2451-15-734-309 2451-15-734-311
6	Information Technology	First Prize	Smart Rescue Wagon	D.Muninder	2451-16-737-058 2451-16-737-071 2451-16-737-067
		Second Prize	Temperature Control Fan Using Arduino	CH.Srujana	2451-16-737-003 2451-16-737-006 2451-16-737-009
		Second Prize	Ceritification Validation Using Block Chain	K.Sri Lakshmi	2451-16-737-034 2451-16-737-036 2451-16-737-042

7	Mechanical Engineering	First Prize	Water less Air Cooler	Dr.M.Madhavi S. Ramanathan S.Shiva Kumar	2451-15-736-090 2451-15-736-118 2451-15-736-021 2451-15-736-119
		Second Prize	Experimental Investigation on Bio Mass gasification to process Municipal Solid waste	G.S.Sharama R.Ravi Kumar	2451-15-736-063 2451-15-736-075 2451-15-736-079
8	Master of Business Administration	First Prize	A Study on Employee Engagement With Reference To IT Industry	K.Sri Divya	2451-17-672-004
		Second Prize	A Study on NPA of HDFC and SBI	Dr.Rama Devi	2451-17-672-044
		Second Prize	A Study On Employee Motivation At BDL	K.Sri Divya	2451-17-736-038
Mini & Science Projects					
9	Applied Science and Humanities	First Prize	LI-FI	Ms.Rekha	2451-18-734-095 2451-18-734-074 2451-18-734-083
		Second Prize	Android Controlled Bluetooth Robot	Ms.Rekha	2451-18-735-126 2451-18-735-129 2451-18-735-138
10	Computer Science and Enginering	First Prize	Voice conrolled Robot	G.Vijay Kumar	2451-17-733-146 2451-17-733-133 2451-17-733-132
		Second Prize	Wearable Gadget For Blind	K.V.Srilakshmi Aasharani	2451-17-733-158 2451-17-733-157 2451-17-733-171
11	Mechanical Engineering	First Prize	Two D.O.F Robo arm	Dr.J.KandaSamy	2451-17-736-090 2451-17-736-103 2451-17-736-104 2451-17-736-110
		Second Prize	Stair Climbing	Dr.J.Kanda Samy	2451-17-736-066 2451-17-736-068 2451-17-736-071 2451-17-736-073

VALEDICTORY SCHEDULE

Timing (PM)	Agenda
3:00-3:05	Inviting Dignitaries on to the dais
3:05-3:10	Invocation song
3:10-3:15	Summary of Project Expo-2019 by Chief Coordinator- EDC Cell –V.Ashwini Kumar
3:15-4.00	Experts Suggestion – Department wise
4:00-4:05	Address by Principal, MVSR- Dr. G. Kanaka Durga
4:05-4:20	Address by Chief Guest- Dr. P Ravi Kumar, Professor NIT Warangal
4:20-4:25	Felicitation to Chief Guest by Principal, MVSR- Dr. G. Kanaka Durga
4:25-4:40	Prize Distribution Announcement by Chief Coordinator RDC Cell-Dr.M.Madhavi
4:40-4:45	Vote of Thanks by Mr. T.Murali Mohan Raju- Faculty Coordinator-MED

PROJECT EXPO-2019

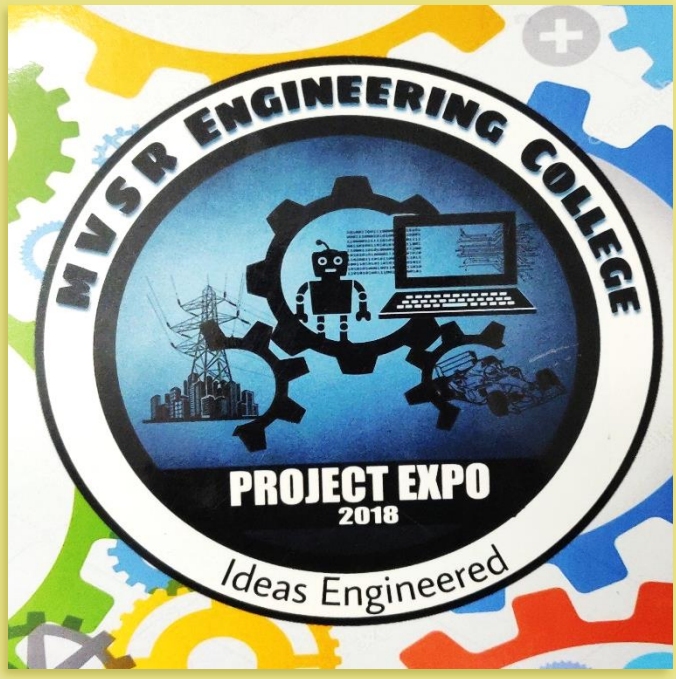
Valedictory and Feedback Session

Date & Time: 29th, March, 2019- 4.00 to 5.00pm
Venue : Mechanical Conference Hall, MED Block

Summary of Experts' Feedback

1. Observed to have good thought process in some projects.
2. Enthusiasm and interest to develop products is laudable.
3. Commercializing the product is a long way to go. College should collaborate with industries for the development of the innovative products.
4. Some products showcased in Information & Technology are viable to Industry.
5. Some projects are in premature state and needs clarification on the concepts and purpose of the product.
6. Proof of Concept and Relevant Theory must be in place.
7. Proper emphasis on Mathematics relevant to the problem is required.
8. Component of original contribution and innovation should be clearly expressed.
9. The journey starting from idea to Student Project to Product is long, and it evolves through various stages of development to make it suitable for end use. This requires more work involving more students either from final year or from third and final years, if possible. It also involves inter disciplinary effort, and hence students from across various disciplines need to work together.
10. Take the support of Professional bodies to step forward towards Entrepreneurship.

Thank You



Souvenir compiled by

Suri Srinivas

Assistant Professor, MED

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IEEE MVSR

PROJECT EXPO - 2019

IDEAS ENGINEERED···

29th March 2019

AUTO pavement of life journey.

When MECH anical rests the world stops.

If god doesn't build it , CIVIL do it.

I C world embedded with ECE.

To the Dark with Th EEE Spark

I T makes world unified with strong connection.

Build with Intelligen CSE.

M B A shapes global leaders for tomorrow.

FACULTY COORDINATOR

T . MURALI MOHAN :- 8019622303

STUDENT COORDINATORS

SPUTHNIC :- 9154120315

SHIVAM :- 7730067725

SONY LAL :- 9063554467

SANGRAM :- 8919177707

AVINASH :- 8712853393

YAMINI :- 9110579725

RAMYA SRI :- 8498995506

ARUN KUMAR :- 9948129560

SIVA RAJU :- 9177414400

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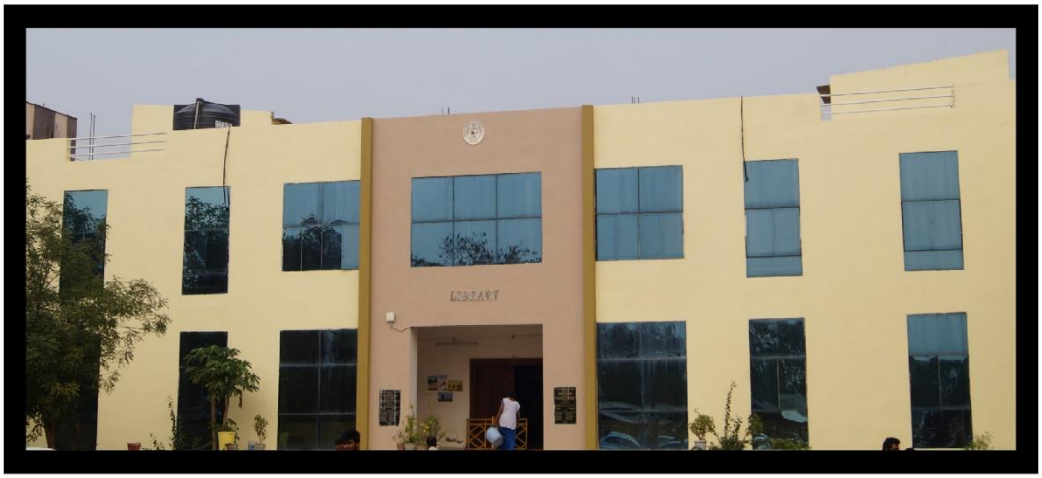

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