P.E.S. College of Engineering

Mandya- 571 401, Karnataka

TEQIP-3

INDUSTRY INSTITUTE INTERACTION CELL

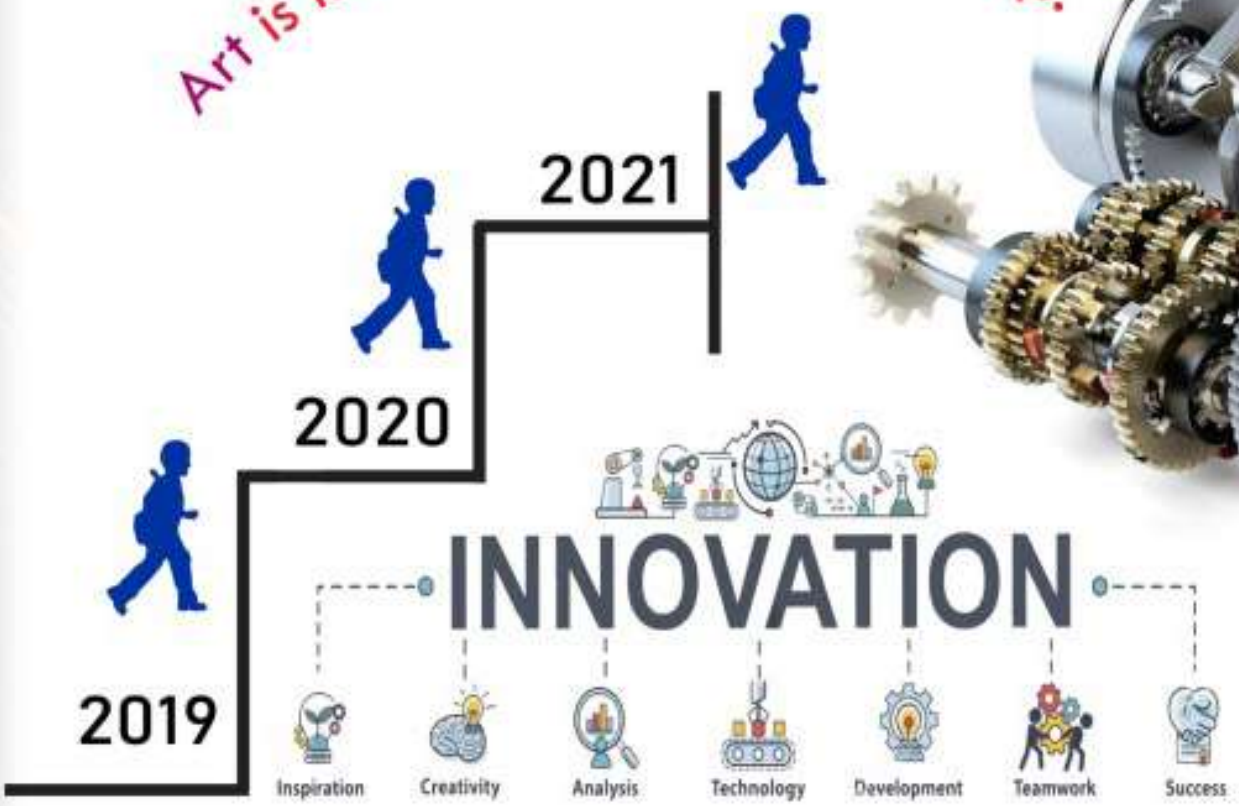
(Sponsored by TEQIP-3)

Navinya

Volume 2, 2021

Creativity is allowing Onself to make Mistakes.

Art is knowing which ones to Keep.



Students develop Integrated Road Safety System

IRSS reduces response time of medical staff, sends signals to road users

T R SATHISH KUMAR
MYSURU, DHNS

Even as the National Road Safety Mooth is underway (January 18 to February 17), the project of the students of Mandya-based PES College of Engineering, an 'Integrated Road Safety System' (IRRS), assumes significance.

IRRS may help to reduce the response time of the medical staff, which is vital for the survival of individuals involved in a mishap, and also send signals to road users for safety.

Prize winner

'Revolution in Travelling with Integrated Road Safety System' by N S Sanjay, B S Samnith, B Nived and V Soumik, had the guidance of Deepika, assistant professor, Computer Science and Engineering. The project also won the second prize in South India level Hackmania competition, held in association with Binghamton University of New York, USA, and Uma Nath Singh Institute of Engineering and Technology, Jaunpur, Uttar Pradesh, under Third phase of Technical Education Quality Improvement Programme (TEQIP-3) sponsorship.

Principal of PES College of Engineering, Mandya, H V Ravindra said that according to the Union Surface Transport Ministry, over 1.5 lakh people were killed in road accidents in 2015. "It is more than the number of people killed in all our wars combined. One serious road accident occurs in every country per minute and 16 die on Indian roads every hour. The aim of the project was to reduce the response time of the medical staff, which is vital for the survival of the victims of mishaps," he said.

Principal H V Ravindra felicitates the students of PES College of Engineering, Mandya, who won a prize in the South India level Hackmania competition, recently.

Fatalities

He said, "There are many reasons for traffic accident fatalities. One of them is delay in emergency assistance. To overcome this, IRRS identifies an accident, using various sensors and notifies the personnel concerned within 20 seconds. It also provides a geolocation of the place of accident."

Deepika, assistant professor, said that the Indian Road Congress (IRC) specifications for road humps are clear. But, it is just theory. "The statistics prove that 11,000 fatalities happened in 2015 due to road humps alone. The project uses geofencing to detect and notify road humps as early as possible. A geo fence is a virtual parameter for a real-world geographic area. It is dynamically generated, like in a radius around the point location. Once all humps are identified, whenever the vehicle enters the geo fence radius of a hump, a notification is sent to the vehicle to slow down," she said.

Cloud black-box

"Under IRRS, a cloud black-box is installed for real-time tracking and anti-theft. All data, read from the sensors of the vehicles are stored in this black box, which can be accessed from anywhere, any time. The retrieved information is uploaded into the cloud, when internet is available. Once uploaded, the data in the black-box can be rewritten. These details can be used to analyse the problem that caused the accident," she said.

Deepika further explains, "Besides, the project makes use of an SOS button, to send the precise location of the vehicle. This is to call an emergency team for assistance in case of an undetected problem, like sudden health issues. The project also has a wheel alignment fault detection and notification system."

"Usually faults in wheel alignments are recognised only when it is dangerous. But, IRRS has real-time monitoring of wheel alignment, so that possible accidents can be prevented. Generally, all these features are seen in high-end cars, as separate individual devices. However, IRRS has integrated all these features in a single unit, which costs approximately Rs 7,000. This unit can be used in economy cars, to enhance road safety," she said.

ಪಿಇಎಸ್‌ನಲ್ಲಿ ಮಾದರಿಗಳ ಪ್ರದರ್ಶನ

ಮಂಡ್ಯದ ಪಿಇಎಸ್ ಎಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜಿನಲ್ಲಿ 2019-20ನೇ ಶೈಕ್ಷಣಿಕ ಸಾಲಿನ ಕೃತಿಸ್ವಾಮ್ಯಕ್ಕಾಗಿ ಸಲ್ಲಿಸಲಾದ ಯೋಜನೆಗಳ ಪ್ರಾತ್ಯಕ್ಷಿಕೆಯ ಪ್ರದರ್ಶನವನ್ನು ಪ್ರಾಂಶುಪಾಲ ಡಾ.ಎಚ್.ವಿ.ರವೀಂದ್ರ ಉದ್ಘಾಟಿಸಿದರು.

ಪ್ರಜಾವಾಣಿ

ಪಿಇಎಸ್ ಎಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜು ವಿದ್ಯಾರ್ಥಿಗಳ ಮೂಡಿದ ಆವಿಷ್ಕಾರ

ಗಮನ ಸೆಳೆದ ವೈರ್‌ಲೆಸ್ ಚಾರ್ಜಿಂಗ್

P.E.S. College of Engineering

Mandya - 571 401, Karnataka

(An Autonomous Institution Affiliated to VTU, Belagavi)

Grant -in- Aid Institution (Government of Karnataka)

Accredited by NBA, New Delhi, Approved by AICTE, New Delhi.

Phone : 08232-220043, 220120, 238330, 238683, 238042

Fax : 08232-222075, Website: www.pescemandya.org

INSTITUTE TENETS

Vision

"A leading institution imparting quality engineering and management education developing creative and socially responsible professionals."

Mission

- To provide state of the art infrastructure, maithe faculty to be proficient in their field of specialization and adpt best teaching-learning practices.
- To impart engineering and managerial skills through competent and committed faculty using outcome based educational curriculum.
- To inculcate professional ethics, leadership qualities and entrepreneurial skills to meet the societal needs.
- To promote research, product development and industry-institution interaction.

Quality Policy

"Highly committed in providing quality, concurrent technical education and continuously striving to meet expectations of stake holders".

Core Values

Professionalism

Empathy

Synergy

Commitment

Ethics

Pioneers of P.E.S.C.E

Late Sri
K.V. SHANKARAGOWDA
Founder Chairman
P.E.T (R), Mandya

Late Sri. K.V. SHANKARAGOWDA, a Scholar and an Educationist, was the founder of People's Education Society ®, Mandya. He was also known as 'PURUSHA SARASWATHI' for his enormous contribution towards promotion of education in predominantly agriculture oriented Mandya district. Poet Laureate KUVEMPU called him as 'NITHYA SACHIVA' for his dedicated work towards upliftment of rural people, as Minister of Education in the Government of Karnataka.

Sri.K.V.Shankaregowda, who had great social concern was appalled by the educational backwardness of Mandya district and wanted to contribute to the development of education in the district. Encouraged by the idea of an over-all educational advancement of the district, eminent social workers of the era, under the guidance of Sri K.V.Shankaregowda, founded and registered People's Education Society in 1958. The Establishment of the People's Education Society at Mandya can be said to be a highly important voluntary effort made for the progress of education in the district. P.E.S College of Engineering was started in 1962 under People's Education Society.

Dr. H.D.Chowdaiah
Former Chairman
P.E.T (R), Mandya

Dr. H.D.CHOWDAIAH, former Member of Legislative Assembly and Council, Government of Karnataka, a great visionary and a strict disciplinarian. He is former chairman of the People's Education Trust®, eminent architect of all the institutions under People's Education Trust®. He has taken many constructive initiatives for the progress of different institutions under the trust. He has been conferred with many awards and honours by various associations and institutes for his service and contributions to the society, notable among which is honorary doctorate by Karnataka Open University in the year 2012 and Chunchashree award by Sri Adichunchanagiri Mahasamsthana Math in the year 2018, Swarna Rathna Purshkara-2021 of Suarna TV and Shanthaveri Gopalagowda Award-2021 (Kannada Janashakti Kendra).

Sri K.S. Vijayananda is presently Chairman of P.E.T (R.), Mandya. He is also Chairman of Governing Council, P.E.S. College of Engineering, Mandya. We are happy to mention that recently he has been elected as Secretary of Karnataka Aided College Management Association. He is a grandson of Late K.V. Shankaregowda, founder Chirman of People's Education Society (R.), Mandya and former Education Minister, Government of Karnataka. He is also son of Sri K.S. Sachidananda, former MLC and former secretary of People's Education Society (R.), Mandya.

The management under the leadership of young Chairman Sri. K.S. Vijayanand, has its visualization as "it is committed to develop student potential through high quality teaching - learning processes and state of art infrastructure ", is determined to improve the academic standards and campus environment to impart quality education to make students of institute, **P**rofessionally **E**xcellent **S**ocially **C**ommitted **E**ngineers in synonym with **P.E.S.C.E.** through experimental learning with modern education tools and structured inputs.

Sri K.S. Vijayananda
Chairman
P.E.T (R), Mandya

Profile of P.E.S.C.E

P.E.S. College of Engineering, Mandya is one of the pioneer Engineering Colleges in India started in the year 1962 by People's Education Society, Mandya (currently known as People's Education Trust) under the leadership of late Sri K.V.Shankaragowda with the help of philanthropic farmers of Mandya District. Sri K.V.Shankaragowda was former Education Minister of Government of Karnataka, a person with a missionary zeal and had a long cherished ambition to promote and disseminate knowledge. The sole objective of the college was to promote Technical Education among the students of Rural Areas. The college is permanently affiliated to Visveswaraya Technological University (VTU), Belagavi, (Previously affiliated to the University of Mysore) and has obtained Autonomous status in the year 2008-09 by the UGC. The college is functioning under the Grant-in-aid code, Government of Karnataka.

The college managed by Peoples Education Trust, Mandya and steered by the Chairman Shri K.S Vijayananda. Institute is recognized by All India Council for Technical Education (AICTE), New Delhi and Thrice Accredited by National Board of Accreditation (NBA), Accredited by National Assessment and Accreditation Council (NAAC) and ranked 147th by MHRD, National Institutional Ranking Framework-2020 (NIRF-2020) and 2nd place in category of Govt. and Aided Engineering Colleges of Atal ranking (ARIIA) 2020.

The college has Excellent academic, sports complex and other amenities spread across 62 acres of the beautiful lush green campus. The college is running 8 Undergraduate BE programs and 7 Postgraduate programs. It consists of 5 M.Tech programs, MBA and MCA which are affiliated to Visvesvarya Technological University. The total intake of the college is 820 students for UG course and 228 students for PG course. Besides, more than hundred research scholars pursuing MSc (Engg) & Ph.D research programs.

After obtaining Autonomous status, the Management has redefined its vision and mission "it is committed to develop student potential through high quality teaching - learning processes and state of the art infrastructure and is determined to improve the academic standards and campus environment to impart Quality Technical education. As per the Washington Accord, we have revised our curriculum to adopt Outcome Based Education (OBE). Further, Choice Based Credit System along with Out Come Based Education is adopted since 2015-16. Institutional Strategic Development Plan approved by Board of Governors to make students of P.E.S.C.E. Professionally Excellent, Socially Committed Engineers in Synonym with P.E.S.C.E.

To cater to the needs of the students, necessary laboratories added to the infrastructure. The college campus computer network has been upgraded and entire campus is provided with Wi-Fi facility to access internet. The institution has full pledged infrastructure with well qualified and experienced faculty. In order to update the knowledge of the faculty and technical staff with the latest technology, the faculty members and teaching staff deputed at regular intervals for Faculty Development Programs (FDP) and technical training. The FDP programs conducted regularly in house by inviting experts from industries and reputed institutions.

The college is beneficiary of TEQIP II grant (Rs. 10.00 crores) under component 1.1 during 2010-2017. The broad objectives of the Programme (TEQIP) is to create an environment in which engineering institutions selected under the Programme can achieve their own set targets for excellence and sustain the same with autonomy and accountability. Support development plans including synergistic networking and services to community and economy for achieving higher standards, to improve efficiency and effectiveness of the technical education management system. The effort would provide a flexible platform to perform to acquire excellence in specialized areas and emerge as world-class institutions. The TEQIP funds utilized effectively and all the Departments Programmes have procured latest equipment to their laboratory to train students with the latest equipment as per industry standard.

Further, for the efficient and effective implementation of TEQIP -II grant under component 1.1 during 2010-2017, the College is chosen for TEQIP-III grant (Rs.7.00 crores) under component 1.3 for the period 2017-2021.

During 2008, P.E.S. College of Engineering became one among the 14 Autonomous colleges in Karnataka. This Autonomous status provided the flexibility to set one's own syllabus, start programmes specific to demand, conduct exams, etc.. Current intake of students for UG & PG Programme is about 1048, spread across an array of disciplines. P.E.S.C.E. offers bachelor of engineering (BE) in Automobile, Civil, Mechanical, Electrical and Electronics, Electronics and Communication, Industrial and Production, Computer Sciences and Information Sciences. P.E.S.C.E. offers 5 master of technology (M.Tech) Programmes, A Master of computer application and Master of Business Administration program. About 150 scholars are currently pursuing Ph.D under the able guidance of about 55 Ph.D Guides/Supervisors. It is noteworthy that P.E.S.C.E. Faculty and students have 15 patents so far. Additionally, P.E.S.C.E. is one among the 31 Engineering colleges in the country selected for World Bank - MHRD's prestigious TEQIP grants.

P.E.S.C.E. has set up Centre's of Excellence centres in Collaboration with academic Institutes and companies. These organizations also provide our students opportunities, thus making them industry ready at the time of graduation. Our Institute also has a Bio-fuel centre funded by Government of Karnataka. In addition to this, Institute has collaboration with various national and international academic institutions/Universities.

Training & Placement centre of our institute plays a major role in transforming the student fraternity and graduates for their overall growth, skill and campus placements

P.E.S.C.E. faculty is highly qualified with about 35% of them holding Doctoral Degrees. P.E.S.C.E. has under gone significant metamorphosis in terms of infrastructure, with a state of the art library, golden jubilee block for special lecturers, boys & girls hostel, refreshment area and parking area. The independent infrastructural buildings for all the UG & PG programmes, library, academic lecture halls, smart classrooms, Auditoriums for different purposes are very well developed. Further, well established outdoor as well as indoor sports complex facilities cater for the requirements of not only for students & faculty but also for society

Inclination of The Chairman

Sri. K.S. Vijayanand
Chairman
P.E.T (R), Mandya

Famous business magnet, Steves Job has quoted “Innovation distinguishes between a leader and a follower “. Our college should create the leaders; leaders of the technology, leaders of the nation and leaders of the Globe. The management is encouraging all such activities which boost up the innovation. I am very happy to learn that several innovative projects have been carried out in spite of the presence of the era of pandemic. Expert of the Technological field Dr. D.K Subramanian, Retired Professor of Indian institute of science has critically evaluated and selected some of the best innovative projects for the honour of cash prizes. Certainly, this will arouses the interest in innovativeness in other students also.

Further, my wish and suggestion is to carry out the innovative projects in the field of “Prevention and protection from pandemic diseases”, “Traffic congestion” , “Environmental protection”, “Disaster management”, “Enhancement of agricultural crop production and protection”, “Crop and soil monitoring management”, “Automated farm equipment’, “vertical farming”, “Effective waste disposal management”, Modern technical educational aids” etc.,

Our students/Faculty should also serve to the needs of the local people and uplift their standard of living. With respect to that, in their research they have to give more weightage to the thrust areas of the Mandya district like “Micro irrigation”, “Bio fuel plantation”, “Organic farming”. “Modernization of the Jaggery (Highlighted in One District, One Product' scheme) making units”. Finally I thank Principal Dr. H.V Ravindra and his team to bringing out the “Navinya” - a multi colored souvenir. I hope it will reach all the stake holders of the college and make them to aware about the academic and research development of the college.

Pen of the Principal

Dr.H.V Ravindra
Principal

A year passed after the publication of souvenir “Navinya” volume-1. In the past one year world faced biggest problem of the century namely Pandemic COVID-19. As per the quote “Necessity is mother of invention” we have invented successfully several accessories and finally vaccine to prevent and to fight against it. Last one year was definitely litmus test to our innovativeness. During the peak period of the projects of the students there was a lockdown. But, in spite of the lockdown majority of our students successfully completed the projects. I am very to mention that in this tough year also, some of the Innovative projects clinched the prizes/appreciations in competitions and brought laurels to the college. It is a pleasure note that the publications (Both UG & PG) were also crossed century.

From past three years the college has successfully organizing “Innovative Technical Projects Exhibitions” which was dragged the attention of all stake holders and appreciated by the media persons. The best exhibited projects have been honored with cash prizes and supported financially by “Technical Education Quality Improvement Programme” (TEQIP). But, this year due to the limitations imposed by COVID-19 College was unable to organize the exhibition.

But, to display/exhibit the selected innovative projects and to give wide publicity to the same we have decided to organize phase wise “Project presentation programs” in front of the media and other invitees. First, the videos of the selected projects were displayed at press meet held at “press club auditorium”. Later, we have organized 5 phases of Project presentation programs encompassing the selected projects of all branches of UG and PG at the campus of the college. Each program consisted of presentation of abstracts (both in English and Kannada), photos, videos and working models by the students and guides. The projects details were telecasted very well in TV Channels and covered in the news papers. The highlight of this year is, on the occasion of “kannada Rajyostava”, to share the benefits of the outcome of the projects with the public’s, “Abstracts of the innovative projects in kannada” have been uploaded to the website of the college.

Specialty, of this year is a CD containing the details (Abstract, photo and video) of the innovative projects was released on the auspicious occasion of birthday of our honorable Former chairman Dr.H.D Chowdaiah. Now, to strengthen the documentation further, the college is releasing souvenir “Navinya” volume – 2. I Hope, the CD and “Naviya” throws some light on the innovative projects of the academic year 2019-20. I thank the editorial team of “Navinya” volume-2 for their fruitful efforts in bringing out the colorful souvenir.

Desk of the Dean(I.I.I)

Dr.B.S. Shivakumara
Dean (Industry Institute Interaction)

I have mentioned the following story of "Samudra Manthan" several times in the context of Innovativeness/creativity. Samudra Manthan, or the churning of the ocean of milk in search of nectar. The Gods and Demons line up on either side, using Mandara a piece of the legendary mountain Meru, as the churning rod, and Vasuki the cosmic snake as rope, to try and extract the ultimate prize. Interestingly, as they are doing this, several by-products also emerge, including Halahal which is poison. It is only in the end that nectar surfaces. This is a wonderful metaphor for the creative process itself. The question is "Samudra Manthan" is story or Illusion or reality? But, often great ideas emerge when two conflicting, strongly polarized points of view are allowed to grapple. Jeff de graff has also quoted " Innovation is created as a result of constructive conflict", this abrasion of two concepts inevitably gets innovative sparks to fly. Sometimes 'win-win' solutions emerge.

For instance, the battle between power and looks on one side, and mileage on the other, when it comes to motorcycles in our country, has now seen several brands which seem to straddle both extremes. An intriguing corollary to this tale is that like in the churning of the ocean, even in any creative brainstorming process it is important not to jump at the first few ideas which emerge. As we have seen these could sometimes be toxic.

One more astonishing thing is a similarity between the modern "Big Bang theory" of Universe creation and "Samudra Manthan". It proves that our ancestors were also Innovators. They have gifted Rigveda: concept of natural law, hymns & arches; Samveda: book of melodies; Yajurveda: the book of Sacrificial formulas, the whole, series of 27 or 28 nakshatras. Number names up to 1012; Atharveda: astronomical knowledge, more detailed medical Knowledge. Also, highlights of their contributions are "The Concept Of Zero", "Plastic Surgery", "Weights::A System Of Measuring", "Chess", "Cotton: Natural Fibers and Cultivation", "Yoga", "Cataract: An Indian Invention In Medicine" etc. But many inventions were vanished due to lack of documentation. Only a little documentation is left. The conclusion is documentation needs time. The "Navinya" is one such document that preserves innovative ideas and motivates the future citizens of India: i.e. students for further innovation.

The present year is a special year with a special problem i.e. pandemic COVID-19 and by our innovativeness, the country succeeded to found the solution to vaccines. It is one more jewel to the crown of "Make in India". I am happy to conclude that despite the powerful COVID break; most of our students completed their projects successfully and proved their determination. They accepted the change and challenge and fought against it. To mention the few students Projects namely, "Revolution in Travelling by Integrated Road Safety System" which clinched second prize in south India level competition Hackmania, (CS&E department), "Paddy Crop Disease Detection Using Machine Learning" and " ViRobot to treat COVID patients" (Both from E&C department) and more than 100 publications (From Both UG&PG) in conferences and Journals exhibited our academic strength. Hats off to them. Navinya Volume-2 is their fruitful contributions only.

Finally, I thank Former honorable chairman, P.E.T(R) H.D Chowdaiah, Present honorable chairman P.E.T(R) Sri. K.S Vijayanand, Respected Principal Dr.H.V Ravindra for their guidance and support in carrying out the innovative projects. I am very much indebted to our mentor Dr.D.K Subramanian Retired Professor of the Indian Institute of Science for his critical evaluation and feedback about the projects. I am very much grateful to media persons, who gave wide publicity to our innovative projects and encouraged us.

Cheers of The Chairman, BOG, TEQIP

Dr. Ramalingaiah

Director, P.E.T Institutions
Secretary, Mandya Krushik Sarvodaya trust
Member, Karnataka Science and Technology Academy
Alumni member, Mysore University

"Innovation" is a buzzing word in this competitive world. Innovation has the potential to add colossal value to practically everything and anything – it doesn't always have to be of monetary value which is why it plays such an important role in engineering. It can strengthen the market uptake of raw materials solutions and build a bigger platform for a greener future. Innovation is a great influence on the growth and survival of today's engineering world, which is why important higher education institutions are committed to the teaching of innovation and entrepreneurship.

Engineers work to improve society, and not just for the benefit of the local community, but the planet as a whole. Over the last few years, there's been a rise in developing sustainable innovative solutions, from e-mobility and new battery technology for greener, more sustainable cities, to alternative energy sources and robotics for sustainable mining technology. Without innovation in these areas, modern life wouldn't be possible. In essence, innovation raises the standards of living on a global scale.

By cultivating innovativeness, our young engineers should become T-shaped professionals in the industry. It will also lead to exciting job opportunities and help them develop their career further Our Engineers are essentially inventors for the future. Considering the majority of the above facts of evaluation committees including NIRF, ARIIA has given more weightage to the innovations in their evaluation schemes. Innovation is one of the indicators of Quality. Keeping in mind this, the TEQIP has supported/supporting innovative activities. The "Navinya" volume-2 is one such activity.

Tweet by TEQIP-III Coordinator

Dr. B Dinesh Prabhu

P E S College of engineering has the privilege of getting identified and selected by NATIONAL PROJECT IMPLEMENTATION UNIT [NPIU, A Unit of Ministry of Human Resource Development (MHRD), Govt. of India, for Implementation of World Bank Assisted Projects in Technical Education], as one of the eligible autonomous institutions in INDIA.

Hence, our institution considered for Technical Education Quality Improvement Program (TEQIP) Project Grant of Rs.10.00 Crore under TEQIP-II, Component1.1 during the period 2011-2017 and Rs.7.70 Crore under TEQIP-III, Component1.3 for the period 2017-2021.

With comprehensive monitoring and able guidance, of our Honorable Chairman G. C., President PET®, Sri. K.S.Vijay Anand, Honourable Dr.H.D.Chowdaiah (former president, PET ®), respected Chairman BoG & Director of PET® Dr.Ramalingaiah, beloved TEQIP Director & Principal of our Institute Dr. H. V. Ravindra and TEQIP-Coordinator Dr. B. Dinesh Prabhu, the TEQIP Project II & III is being effectively utilized and implemented at our Institution. Of course, this proud achievement is possible with complete support of faculty, staff, students and established infrastructure of our Institute.

The TEQIP–II is to strengthen institution to produce more employable and higher quality engineers and prepare more post graduate students to reduce faculty shortage. “Strengthening of Institutions” is the long-term objective of the Project emphasizing on production of more employable and higher quality graduate engineers. Improving quality of education (learning outcomes) and employability of graduates are medium term outcomes. TEQIP Project Component helped in Improving Quality of Engineering Education, Research & development and innovation & establishing centers of excellence. The faculties were offered pedagogical training for effective teaching & training. The objectives of this Component are achieved for strengthening institution to improve learning outcomes and employability of graduates. The TEQIP funds utilized effectively and all the programmes/departments equipped with latest equipment to the laboratories to train students as per industry standard.

The TEQIP – III is fully integrated with the Twelfth Five-year Plan objectives for Technical Education as a key component for improving the quality of Engineering Education in existing institutions to improve their policy, academic and management practices. Under TEQIP-III, PESCE, Mandya are the mentors, under Twinning Arrangements to Build Capacity and Improve Performance of institutions for one of the NPIU assigned Institute (UNSIET, VBSPU, Jaunpur, UP). Our institution recognized as high performing Institution, as we met the academic mandates/Performance bench marks set by NPIU and efficiently utilized the grants well in time for all the academic & extracurricular activities along with procuring necessary equipment for laboratories for the benefit of students.

Further, Under TEQIP-III, since March 2020, as the whole world is experiencing the COVID-19 pandemic, our institution has raised to the need of the situation and contributed to various deprived sections of society by distributing the very essential Bio - soap, liquid hand wash, hand sanitizer and also food. This societal activity was very well appreciated by the society as well as by the media. All the said bio products (brand name - NISARGA) were indigenously developed at our campus Bio diesel center.

Also, During the COVID-19 pandemic situation, PESCE took the challenge of conducting online academic task through online teaching classes and academic evaluation of qualifying examination successfully for the award of the degree of UG/PG so as to enable the graduates to cherish their future without losing an academic year.

Wishes of The Dignitary

Prof D K Subramanian

Professor, IISc (rtd.)
Member, Research and Innovation Board, TCS
Distinguished Fellow , IDRBT(an RBI institution)
President, FAER

Engineering and technology has been developing slowly over centuries. steam engines and IC engines took decades for usage to reach a maturity level. Electricity took decades for development and a century for multiple usage. so the twentieth century moved slowly and steadily with mechanical and electrical engineering growing with applications in industries , transportation and services. electricity improved our life considerably. Bangalore got lighting in 1905 itself . so people lead a stable life and a profession. we saw the arrival of electronics and computers by sixtees. these opened several new areas and better activities. mobility - transport and communications - improved greatly. world became a global village. you are seeing the effect of computers , networks , internet and webs in your daily life. that is a major change in twentieth century after electric power in the beginning.

but the situation changed dramatically in the past twenty years. twenty first century heralded a large number of technologies like IOT, big data and analytics, block chain, mobile communications, cloud, edge computing, robotics, machine learning, AI, 3D printing and additive manufacturing, smart materials, fuel cells, solar systems etc. each new invention has hundreds of applications. all these are used in various ways within ten years. it is itself a major upheaval in our life. as if these developments finding new applications is enough, we are seeing a convergence of technologies . multiple technologies are used in a single system. engineering is becoming very large, connected, remotely managed, completely instrumented , and totally automated leading to autonomous, self maintaining, self adapting and even self repairing system with thousands to millions of units interconnected . digital is the way of life now. you are experiencing it through online learning. this exponential growth will not stop. you will shortly see a major transition from digital to quantum (computing) and cognition age. be prepared for changes. don't get a shock . this means you will see in your life at least six to seven technology change cycles. constant learning and alertness plus a curious and questioning life is a must . it is your survival kit.

try to get into the habit of reading and writing regularly and also visiting websites of great universities also regularly during your professional life. keep your eyes open to outside world, outside developments and their impact. also multi skilling is important to be active in professional life.

GOOD LONG INNINGS

Dr. M N Veena
Chief Editor, Navinya

Smt. B P Sowmya
Co-Editor, Navinya

Dear Colleagues,

I am happy to bring the second volume of Navinya-2021. The Name only says....” Young Ideas 2020”. The Navinya is a creative approach that nearer to social needs. Before looking ahead, we would like to offer a word of thanks to our students, faculty and readers, contributors, and our esteemed faculty fraternity for their support to improve the quality of this second edition of “Navinya-2021”. We are a team whose work is in progress actively seeking ideas from campus and community in terms of fresh conception and collaboration ideas in a single platform in terms of “Navinya-2021”.

Also, our main focus will continue to motivate all PG and UG final year students to present groundbreaking ideas with various domains of technological advancements and Humanities, with particular emphasis on quality, safety Systems. This edition of Navinya provides an opportunity for immature ideas from young minds to get inspired by the experiences of our faculty members as Project Guides and encourages interaction among final year students of various disciplines. This second volume of Navinya-2021 gives you an overview of individual departments that come under the umbrella of Industry Institute Interaction Cell which consists of a brief report on Industry interaction activities of the department, Innovative project exhibition winners abstract with photos. We also have a section about a list of projects from the academic year 2019-2020 innovative project winner list with abstracts and photos.

I thank former Honourable Chairman, Dr H.D. Chowdaiah, for constant support and Present Honourable Chairman Sri K.S. Vijayandand, Chairman P.E.T(R), Management team of P.E.T given valuable guidance and motivational words. I am very much indebted to our mentor Dr.D.K Subramanian Retired Professor of the Indian Institute of Science for his critical evaluation and feedback about the projects. My grateful gratitude is to our Respectable Principal Dr. H.V. Ravindra for his valuable guidance and support to organize this exhibition. I am very much thankful to Dr Dinesh Prabhu, TEQIP-3 coordinator, for guidance and support for sponsorship. I thank deep gratitude to Dr Shivakumara, Dean, Industry Institute interaction cell, for his whole support and wonderful guidance in organizing this exhibition and timely release of Navinya.

Finally, We would like to acknowledge the efforts taken by all the faculty members and students for active participation to help us shape this Navinya-2021. I very much admire Sowmya B.P for her support for the timely release of the Navinya-2021. On behalf of the institution, Navinya-2021, we wish all of the great success in all of their future commitment; we look forward to our journey together as we develop the highest bridge between PESCE and Industry.

Editorial Team

CD on Innovative Technical Projects

Dr. S. Vinay
Chief Editor, CD

Sri B.S Puttaswamy
Co-Editor, CD

In today's Computer world, Soft copy" is most often used in contrast to hard copy, which is the printed version of a document. Soft copies can be sent via e-mail or over a network connection, which makes them a more efficient and cost-effective option than using hard copies for communications. It can preserve the data without having an actual physical place. In short, you can get rid of courier services and bulky files.

This year is a "CD on Innovative Technical projects carried out during the academic year 2019-20" has been released on the auspicious occasion of the birthday of our honorable Former chairman Dr. H.D Chowdaiah. Dr. H.D Chowdaiah, Honorable Former chairman released the CD. The CD contains the following details of the Projects:

1. Abstract in Both English and Kannada
2. Photo/ Image/Graphs
3. Video bite containing the brief explanation/functioning of the project

The best part of the projects is the Video bite which is impressive and thrown more light on the projects. CDs have been distributed to media persons and all stakeholders to make them to aware of the details of the projects/innovation/research carried out during the academic year 2019-20 and to yield the benefits required by them.

Departmental Coordinators of the I.I.I

Galaxy of the Industrious Coordinators 2020-21

Dr. N Jagadeesh
Automobile

Mr. Yoga B S
CS&E

Mr. Naveen Kumar S
Civil

Mr.Palanethra
E&C

Mr. Manohar H C
E&E

Dr. B.S. Shivakumara
Dean(I.I.I)

Mr. Srinivasa M
I&P

Mr. Rakshith N
IS&E

Mr. Ganapathy Bawge
Mechanical

Dr.Kiran Kumar A C
MBA

Dr. Veena M N
MCA

Industry Institute Interaction Cell

P.E.S College of Engineering, Mandya

Innovative Technical Projects Competition – 2020

(TEQIP Phase 3 Sponsored)

Prize	Title of the Project	Name(s) of the Student	Name of the Guide
B.E (Automobile)			
I	Power generation by road hump using rack and pinion mechanism (prototype)	Sanjay N, Sharath K J, Thejorashmi H S, Arun Kumar H S	Dr. B Dinesh Prabhu,
II	A Prototype for a Vehicle with Smart Braking System and Accident Monitoring Device using GPS and GSM module	Pushpak Gowda R, Sanchana H S, Sathish Kumar B, Shreyas S	Dr. N Jagadeesh
B.E (Civil)			
I	Determining the effect of addition of Glass fibers in dense Bituminous Macadam	Sindhu G S, Sinchana H, R Laltlankima, Deepak J, Somanath K	Sumanth S.
II	Study on model Footing resting on 2d and 3d reinforced Sand bed using Plastic waste	Hemalatha N, Yamuna M L, Kavana B S, Pavanashree Y H, Rakshitha R	Avinash N.
III	An Experimental Study on Bacterial Concrete using Bacillus Subtilis and Bacillus Megaterium	Nischitha M, Ireen Jose, Sowjanya S V, Gurulingappa, Prashanth B.M	Rashmi M.P.
M.Tech (CADS)			
I	Experimental Investigation of Sugarcane bagasse Ash as a value added material on Compressive Strength of masonry Prism	Shubhavinaya A S	Lakshmi P S
B.E (CS&E)			
I	Smart way to clean city	Harshith S, Nuthan P Shashank M, Shivasharan	S.K Uma
II	GDP Analysis and Prediction	Sunad K, Varun Achar M N, Nanda Kumar V, Namratha M A	V.Chethankumar
III	Revolution in traveling with integrated Road safety system	Sanjay N.S, Sammith B.S, Nived B, Sowmik B	Deepika
M.Tech (CS&E)			
I	Voice disorder detection using machine learning based on MFCC features	Arpitha M S	Dr.Nagarathna
B.E (E&C)			
I	Paddy Crop Disease Detection using Machine learning	Prajwal gowda B. S, Nisarga H.A, Rachana M, Shashank S	B.S Sahana Raj
II	3D Holographic and Traffic Analysis Using Machine Learning	Shubham Verma, Kaniti Sagar, Manoj S, Pooja S	Kumar N Krishnamurthy
III	Brainwave Controlled Automated Wheelchair	Navyashree M, Chandana N, Madhura B N, Nisha U N	Dr. M B PunithKumar
M.Tech (VLSI)			
I	IOT Based Asthma Detection And Diabetes Detection using Machine Learning Algorithms	Rakshitha G V	M. J. Anand

B.E (E&E)			
I	Fabrication of bio chemical Battery for home automation	Chandini P R, Harshitha S, Jayasurya J, Lakshmana K	D.M. Srinivasa
II	Automatic solar panel cleaning robot	Ajmal Shariff, Akash R P, Arshad Ahmed, Ifthekhar Ahmed	B.N. Harish
B.E (I&P)			
I	Design and Fabrication of Wire Peeling Machine	Fabin Jenisha J, Poornima M S, Sachin R, Ravikumar S	Dr.B.S Shivakumara
II	Designing And Developing The 3d Model Of Arduino Controlled Robotic Arm"	Karthik M, Sujanashraya S Sunita Mallikarjun Nalatwad, Swaroop T R	Dr. N L Muralikrishna
B.E (IS&E)			
I	Vision-based text entry using morse code generated by eye gestures	Adarsh S Koundinya, Gowtham S, Prathik R, Sai S Poojith	T M Geethanjali
B.E (Mechanical)			
I	Design and analysis of electric go – kart	Yashas N Raj, Yashwanth Gowda K S, Yogenda H S, Shashank R Gowda	Dr. K J Mahendra babu
II	Design and fabrication of Forest fire detection Robot	Abdul Zubair, Bharath S, Harsha P , Syed Muheen	K N Pavan
III	Characteristics evaluation of mechanical properties of hybrid bio composites fabricated with hand layup technique	Kumara M, Naveen N Nikhil V N, Nikhilkumara T S	Dr. M. Sadashiva
M.Tech (CIM)			
I	Effect of Various Wire Electrode Materials on the Performance of Wire Electrical discharge Machining of Al/SiC Composite Material	Anilkumar M N	Dr.H R Guupavan
M.Tech (Machine Design)			
I	Vibration and noise signal analysis to detect the gear teeth damage in a gearbox with austempered ductile iron as gear material	Raghava Madhyastha P	Dr.S.L Ajit prasad
MBA			
I	The Impact Of High Performance Work Practices On Employee Engagement At Selected IT Company At Bangalore	Nisarga G S	Pooja Nagpal
MCA			
I	I.O.T Based smart agriculture monitoring system	Swaraj C M	K.M. Sowmyashree
II	Traffic Signal Monitoring and controller system	Indushree V D	Dr. M. N.Veena

Dr.B.S Shivakumara
Dean (I.I.I)

Dr.H.V Ravindra
Principal


VI-ROBOT

INDEX

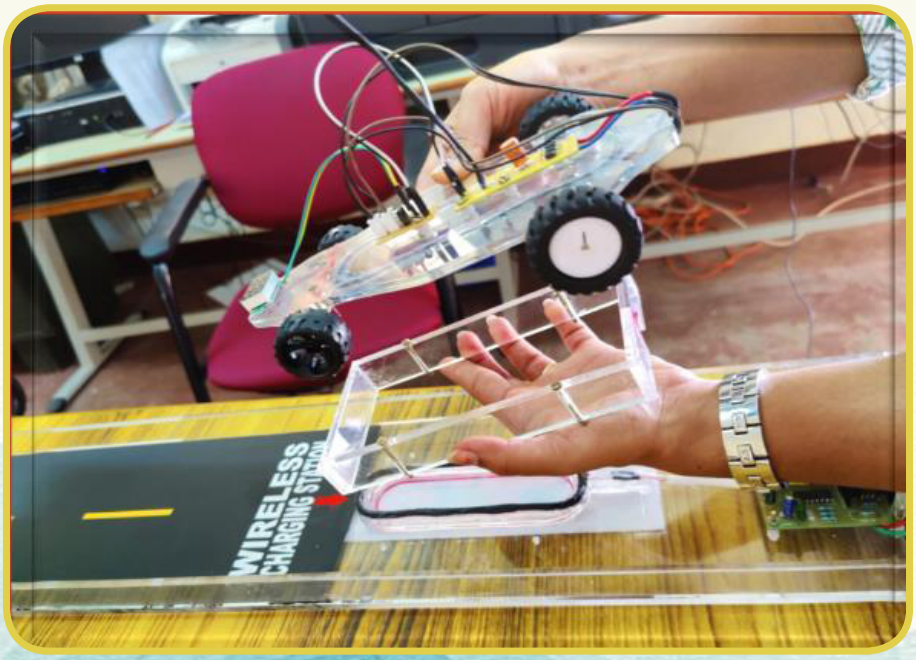
Wireless Charging of Electric Vehicles

Aftab Mehdi, Yashwanth M S, Akshith C P & Anushree U
Final year BE students, PES college of Engineering, Mandya
GUIDE: Dr. K. M. Jagadeesha, Professor & HOD

ABSTRACT

The progress of automobiles for transportation has been intimately associated with the progress of civilization. The automobile of today is the result of the accumulation of many Fears of pioneering research and development. In the last few years, environmental impact and price rise of the petroleum based fuel have increased. For this reason, electric vehicles are much preferred commonly around the world. Now transient period of conventional vehicle to electric vehicle have started.

This paper proposes the concept of wireless charging for electric vehicles (EVs).Plug-in Electric Vehicles (PEV) is burdened by the need for cable and plug charger, galvanic isolation of the on-board electronics, bulk and cost of this charger and the large energy storage system (ESS) packs needed. But by using Wireless Charging systems Wireless charging opportunity. It Provides convenience to the customer, inherent electrical isolation, regulation done on grid side and reduce on-board ESS size using dynamic on-road charging. The main objective of our project is to design and develop antenna system suitable for vehicle using resonant magnetic coupled wireless power transfer technology to electric vehicle charging system. A Resonant wireless transfer system for vehicle charging technology is designed.

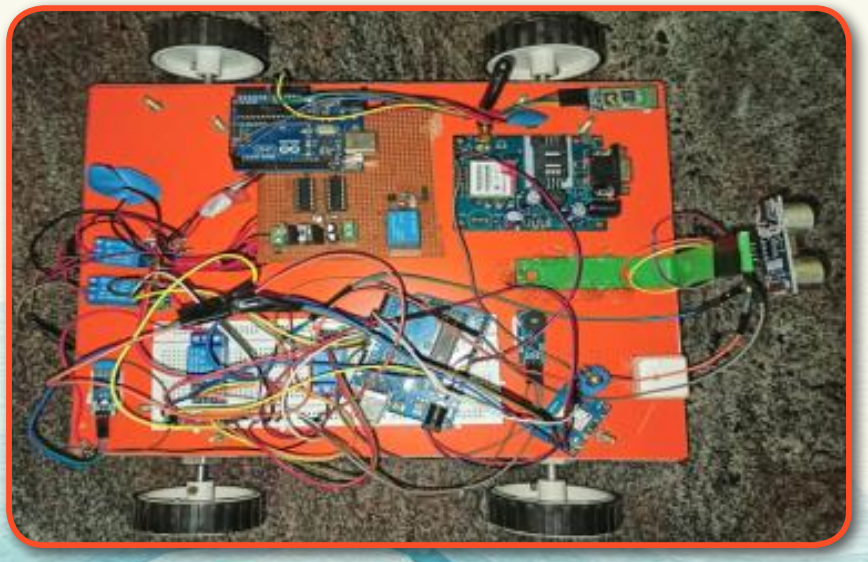


A Prototype for a Vehicle with Smart Braking System and Accident Monitoring Device using GPS and GSM module

Pushpak Gowda R, Sanchana H S, Sathish Kumar B & Shreyas S
Final year BE students, PES college of Engineering, Mandya
GUIDE: Dr. N Jagadeesh, Asssistant Professor

ABSTRACT

Road accidents are a common in today's scenario. Now a day's number of accidents is increases as compared to past. Accidents cause worse damage, serious injury and even death. Accidents prevention has been one of the leading areas for research. Mainly focus on prevention of accidents due to nervousness, loss of control, drunken driving, rash driving etc. Manual methods of applying brakes are always dangerous as it leads to accidents. Unconsciousness of driver, road condition, and uncontrollable speed of vehicle and manual operation of braking systems are the reason of accidents. It is necessary to control brakes automatically through electronics devices to minimize the accident problems. In this project we proposed an effective methodology for automatic controlling of braking system to prevent accidents with the help of electronics engineering The system consists of ultrasonic sensor wave emitter fitted at the front portion of the vehicles and ultrasonic receiver to receive the signal. This reflected wave gives the signal to Microcontroller unit and then the signal is sent to relay switch to apply brakes automatically. It slows down the vehicle by giving a buzzer sound such that driver is also alerted of the obstacle. By using this System we can reduce number of accidents. This project also is to develop a Arduino and GPS tracking system for accidental monitoring. The system consists of cooperative components of an Arduino, microcontroller unit, GPS device and GSM module. If any accident occurs, this device will send mobile phone a short massage indicating the position of vehicle by tracing the location of the vehicle through GPS system to family member, emergency medical service (EMS) and nearest hospital. . The threshold algorithm and speed of motorcycle are used to determine fall or accident in real-time.



Power Generation By Road Hump Using Rack And Pinion Mechanism (Prototype)

Sanjay N, Sharath K J, Thejorashmi H S & Arun Kumar H S
Final year BE students, PES college of Engineering, Mandya
GUIDE: Dr.Dinesh Prabhu B, Associate Professor

ABSTRACT

In the current scenario demand of power is increasing day by day with increasing population. On the other hand energy crisis is also a main issue of today's life and all there is a shortage of conventional energy resources due to its large usage. So, we have to sort out this problem with a technique which will not only overcome this energy crisis but also should be eco-friendly. Many conventional resources are creating pollution so that's why focus is towards eco-friendly solution. Which shows that power could be generated by specially designed speed breakers? A large amount of kinetic energy is being wasted on roads on daily basis in different forms which could be use to generate power. The project is about the design and manufacturing of speed breaker power generator. In this project we are trying to utilize one such source. Electricity is generated by replacing the traditional speed breakers with some simple mechanism. As vehicles pass over the speed breakers, the speed breaker itself goes down due to weight of the vehicle which results in displacement of a rack gear which rotates the pinion connected to shaft of the generator which in turn produces electricity.

This method is an effective way to produce electricity as the numbers of vehicles on the road are ever increasing. Also, the cost of fabrication of the model is low. It can be effectively placed near traffic lights, at the entrance of parking lots and any other place where the traffic density is high. As vehicle passes over it, it starts moving. This method provides an efficient way to generate electricity from the kinetic energy of moving vehicles in roads, highways, parking lots etc. In this report we explain in detail the various types of power generation and also the types of mechanisms. Here in which we are considering rack and pinion mechanism due to its efficiency better than the others which is also explained. In short, this report includes an overview of selection of mechanism and working for the power generation and making the project successful.

Revolution In Traveling With Integrated Road Safety System

Sanjay N S, Sammith B S, Nived B & Soumik V
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mrs. Deepika, Assistant Professor

ABSTRACT

According to the transportation ministry of India, over 150,000 people were killed in road accidents in 2015 alone that is more than the number of people killed in all our wars combined. One serious road accident occurs in every country per minute and 16 die one Indian roads hour. The aim of the project is to reduce the response time of the medical staff, which is vital for the survival of individual involved in the crash. Traffic accidents are a major public issue worldwide and this covers the story of global crisis of road safety system. There are many reasons for traffic accidents namely;

One of them is due to delay in emergency assistance. So to overcome this, our system identifies the accident using various sensors and notifies the concerned personal within 20 seconds from the time of accident and provides a geolocation of the place of accident.

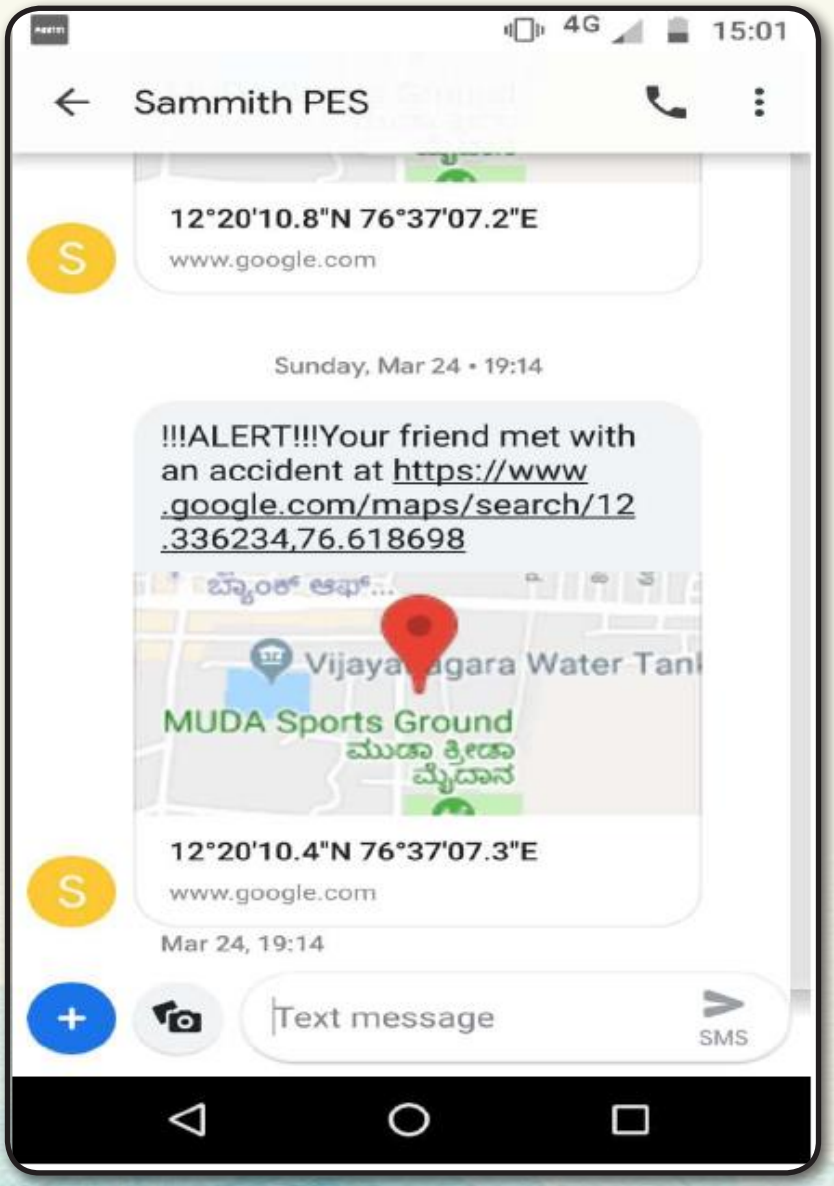
The IRC specifications for road humps are clear but it is just theoretical. The statistics prove that eleven thousand fatalities happened in 2015 alone due to road humps. So we use geofencing to detect and notify the road humps as early as possible. A geo fence is a virtual parameter for a real-world geographic area. It could be dynamically generated, as in a radius around the point location. Here, once all the humps are identified, whenever the vehicle enters the geo fence radius of a hump, a notification to slow down is sent to the vehicle. Machine learning algorithms can be used for further improvisation.

We are also implementing the cloud black-box for real time tracking and anti-theft. All the data read from the sensors are stored in this black box which can be accessed from anywhere and at any time. The Black box acts as a storage device that can be used to store all the information retrieved from the sensors used in the vehicle. The retrieved information is uploaded into the cloud when the internet facility is available, and once uploaded, the data present in the black box can be rewritten. This process will follow. These details can be later used to analyze the problem that caused the accident.

Along with all the above-mentioned features, we also make use of an SOS button which is used to send the precise location of the vehicle. This is to forcefully call an emergency team for assistance in case of any undetected problems, like sudden health issues or any.

We are also implementing wheel alignment fault detection and notification. Usually the faults in the wheel alignments will recognized only when it is dangerous enough, so the proposed system aims in real time monitoring of wheel alignment so that the possible accidents can be prevented.

Generally, these features are seen as separate individual devices in high-end cars. Our proposal combines or integrates all these features in a single unit which makes it affordable for the general public.

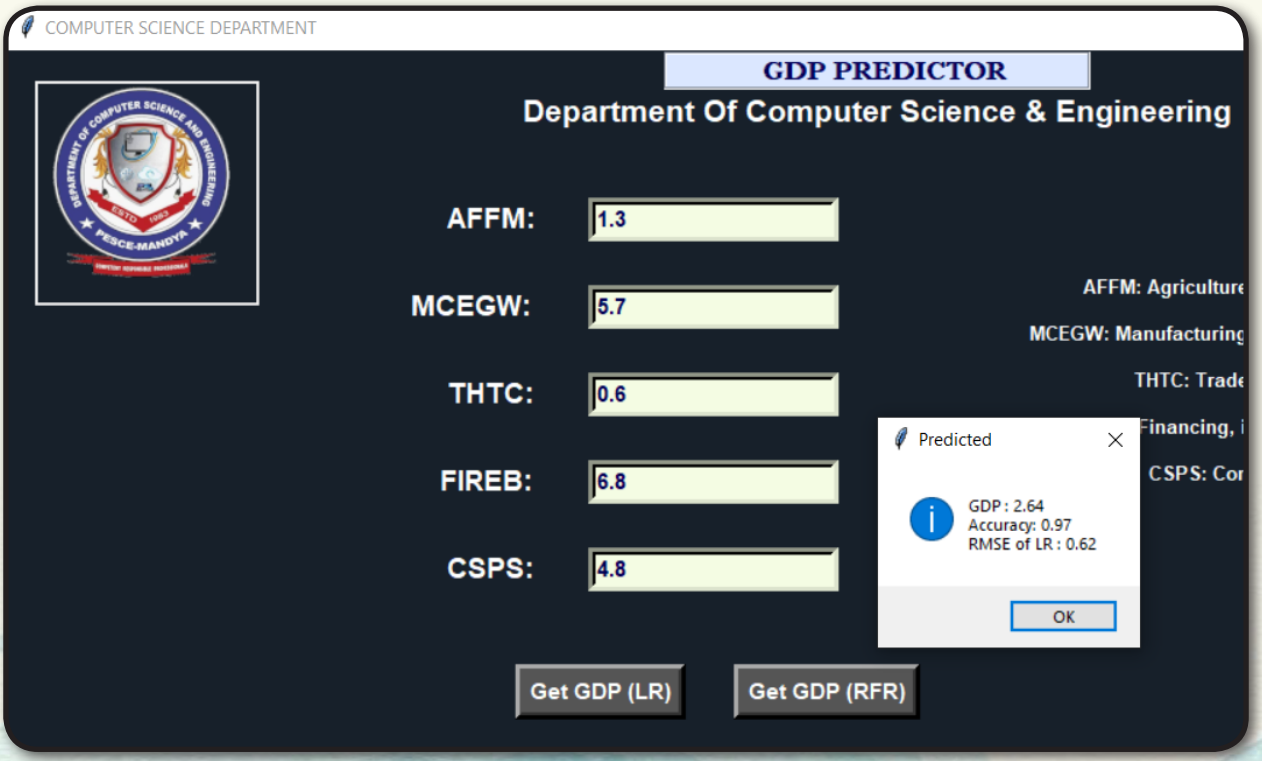


GDP Analysis & Prediction

Nanda Kumar V, Namratha M N, Sunad K & Varun Achar M N
Final year BE students, PES college of Engineering, Mandya
GUIDE: V Chethan Kumar, Assistant Professor

ABSTRACT

Gross domestic products (GDP): is a monetary measure of the market value of all the final goods and services produced in a specific time period, often annually. GDP (nominal) per capita does not, however, reflect differences in the cost of living and the inflation rates of the countries; therefore, using a basis of GDP per capita at purchasing power parity (PPP) is arguably more useful when comparing living standards between nations. Every country relay on its GDP and the GDP decides the country's growth and development. So, in order to reduce human resource and time in estimating GDP we have proposed a system which helps in predicting and manipulating the GDP of the country. Here we have used previous records of the country in order use it as an input to the system. Machine learning algorithm will do two phase calculation of the system with the give new instances. Finally, the measures or the solutions will be generated by the system in order to increase GDP. We have also come with a reverse approach where the required GDP of sectors can be predicted earliest so as to reach the desired GDP. The proposed system will help to analyse and increase India's economic status by predicting the possible future GDP values

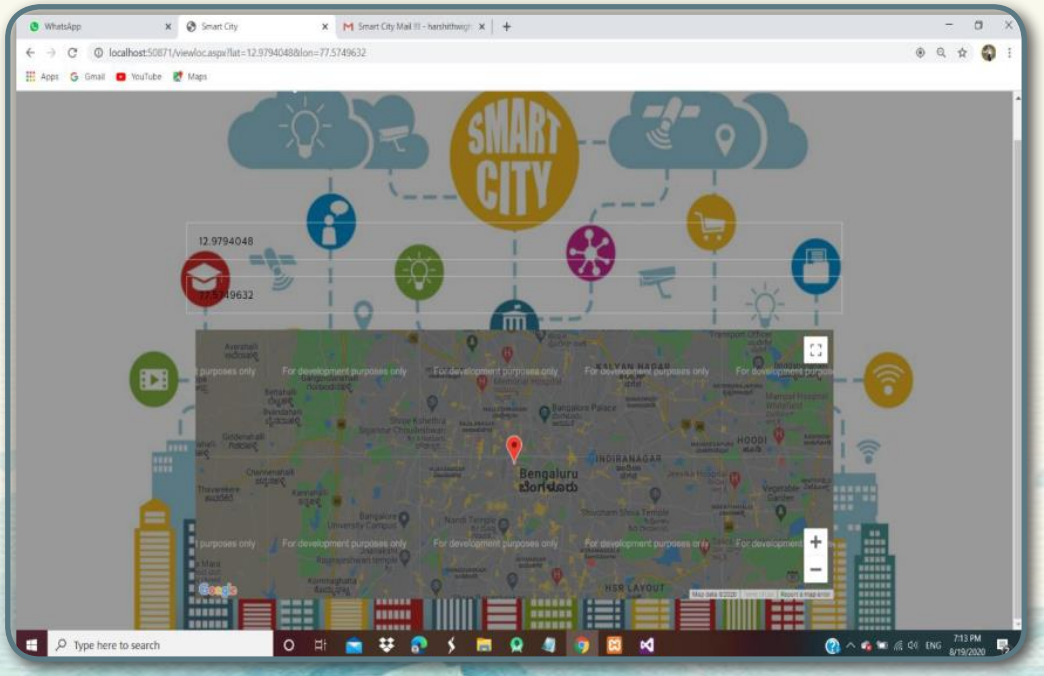


Smart Way To Clean City

Harshith S, Nuthan P, Shashank M & Shivasharan
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mrs. S.K Uma, Associate Professor

ABSTRACT

This project presents a solution for the problem of making quick changes around ourselves. The objective of "Smart way to clean city Android App" is to make an automated and paperless work for the grievances addressed by the public this system enable the automated follow up of the public issues until it is resolved and to provide a quick updates to the citizens for this problems is dropped to the notice of consent person in the department and to the person addressed by them to the government to the elected body. Smart way to clean city Android App is aimed to facilitate support to General Public who face problems and issues like failure of street lights, sparking, electric pole damage and other issues including water supply, drainage system etc. This App helps general public in direct communication with the concerned department and notifies the issues and problems. Benefits of this project include improved targeted communication there by reducing the waiting time for the public to ensure the concerns reach the right department on time and in a simple manner. Traditional ideas of smart cities suggest lots of data collection by using sensors for Electricity, Water & Traffic management. This data needs to be carefully compiled and integrated into a Smart grid and then fed into computers that can focus on making the city as efficient as possible. This process is cumbersome and data management has multiple challenges. In addition, end-users, Consumers & General public communication has minimal input options. By using Simple Smart way to clean city Android App, users will be able to notify the issues seen and alert the department staff to take necessary actions and create a better living lifestyle and better city to live-in. Smart Cities across different countries focus on using digital technology methods for faster, simple and effective notification alerts.



Detection of Fake Review Through Opinion Mining

Ashwini M C
Final year MTech. student, PES college of Engineering, Mandya
GUIDE: Dr.Padma M C, Professor & HOD

ABSTRACT

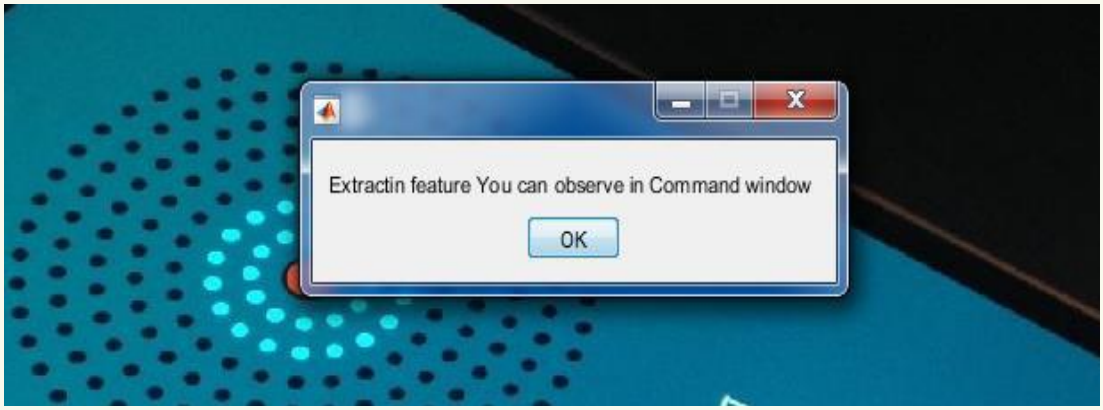
Recently, Sentiment Analysis (SA) has become one of the most interesting topics in text analysis, due to its promising commercial benefits. One of the main issues facing SA is how to extract emotions inside the opinion, and how to detect fake positive reviews and fake negative reviews from opinion reviews. Moreover, the opinion reviews obtained from users can be classified into positive or negative reviews, which can be used by a consumer to select a product. The growth of e-commerce businesses has attracted many consumers, because they offer a range of products at competitive prices. One thing most purchaser rely on when they purchase online is for product reviews to conclude their decision. Many sellers use the decision to impact the review to hire the paid review authors. These paid review authors target the particular brand, store or product and write reviews to promote or demote them according to the requirements of their hired employees. This paper aims to classify Amazon product reviews into groups of positive or negative polarity by using machine learning algorithms. In this paper, we analyze online product reviews using SA methods in order to detect fake reviews. SA and text classification methods are applied to a dataset of product reviews. This paper focuses on detecting fake reviews from a set of product reviews by simulating fake reviews that incorporates various types of opinion spam review features and building a training set and then classifying it using Naïve Bayes classification and ensemble classification model like random forest to test the accuracy of the model.

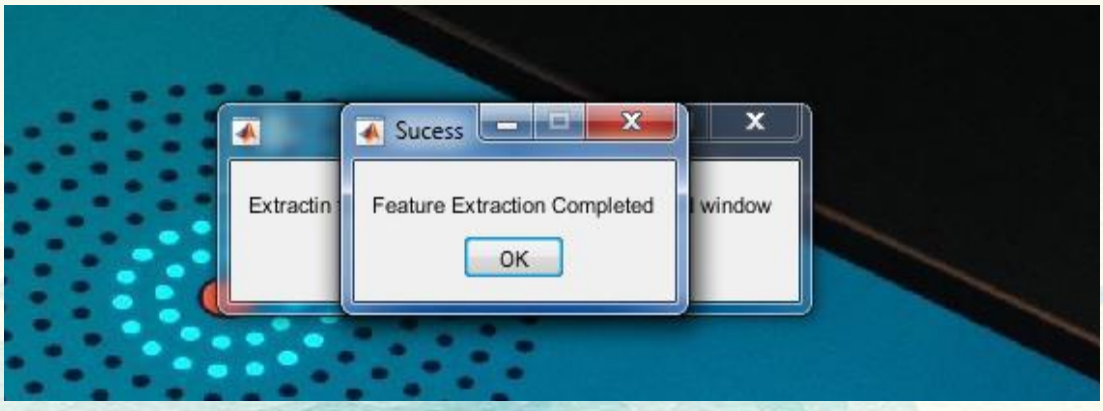
Voice Disorder Detection Using Machine Learning Based On Mfcc Features

Arpitha M S
Final year MTech student, PES college of Engineering, Mandya
GUIDE:Dr. Nagarathna, Professor

ABSTRACT

Vocal disorders are pathological states that discomfort the quality of speech which is produced by the voice box or larynx. The disrupted nature of voice causes inflammation to larynx or voice box mainly due to overuse or irritation or infection. The goal is to build a machine learning model which categorizes distinct class of diseased condition of vocal chords, include Dysphonia or spasmodic dysphonia, Normal, Stammering which is an instance of stuttering and Vocal palsy or vocal fold paralysis from AIISH (All India Institute of Speech and Hearing), voice data repository and voice from individuals. The machine learning classifiers used to handle the classification problem of vocal disorders are Support Vector Machine and K-Nearest Neighbor. The resulted outcome is evaluated based on the features of voice selected from the process of feature extraction using mel cepstral coefficients.





An Experimental Study On Bacterial Concrete Using Bacillus Subtilis And Bacillus Megaterium

Nischitha M, Ireen Jose, Gurulingappa, Sowjanya S.V & Prashanth B M
Final year BE students, PES college of Engineering, Mandya
GUIDE: Ms. Rashmi M P, Assistant Professor

ABSTRACT

Microbial induced calcium carbonate precipitation is a novel method for increasing the physical strength of the cement concrete. The objective of the present investigation is to study the incorporation of bacteria, Bacillus subtilis and Bacillus Megaterium to improve the compressive and split-tensile strength of cement concrete after comparing with conventional concrete. Conventional and bacterial concrete was prepared and its strength was evaluated using standard Indian Specifications. A significant increase in the compressive strength and split tensile strength of concrete with combination of Bacillus Subtilis and Bacillus Megaterium is found after curing for 7 and 14 days. The obtained results revealed that bacterial concreted showed more strength than the conventional concrete. Water which enters the concrete will activate the dormant bacteria which in turn will give strength to the concrete through the process of metabolically mediated calcium carbonate precipitation. The present study concludes that bacteria will not negatively affect the compressive and split tensile strength of the cement concrete.

Study On Model Footing Resting On 2d And 3d Reinforced Sand Bed Using Plastic Waste

Hemalatha L, Kavana B S, Pavanashree Y H, Rakshitha R & Yamuna M L
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mr. Avinash N, Assistant Professor

ABSTRACT

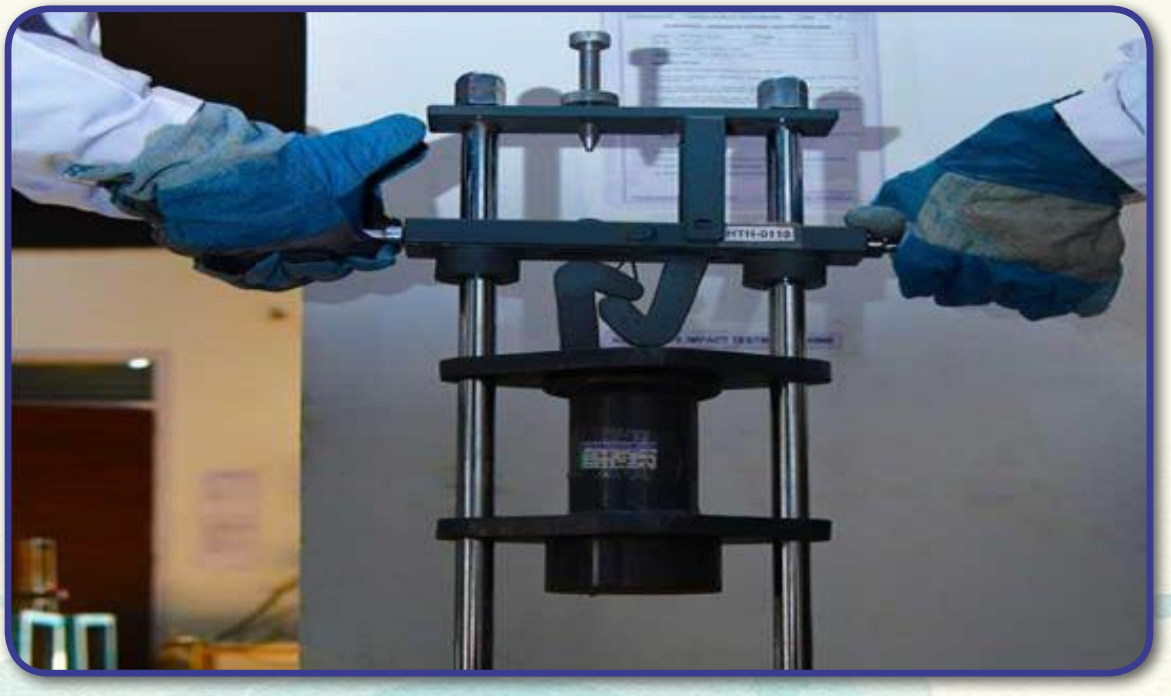
Today the world was facing problem on disposal of plastic waste, there are so many types of plastic waste, in the present investigation we are using waste plastic bottles for the stabilization of soil. Soil reinforcement and soil confinement are the methods in ground improvement techniques, these methods are commonly adopted in geotechnical engineering to stabilize the soil. In the present investigation plain plastic strips (2D) act as reinforcement material and 3D plastic arrangement act as confined reinforcement system to enhance the load settlement behavior of the model square footing. Also studied the effect of number of reinforcement layers, spacing between plastic layers. Comparisons were made to know the effectiveness of inclusion of waste plastic in soil layers on the improvement in the load settlement behavior of sand bed under repeated loading.

Determining The Effect Of Addition Of Glass Fibers In Dense Bituminous Macadam

Laltlankima R, Sindhu G S, Somanath K, Deepak J & Sinchana H
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mr. Sumanth S, Assistant Professor

ABSTRACT

Exponential increase in traffic, overloading of commercial vehicles and significant variations in daily and seasonal temperatures have shown some limitations of conventional bitumen performance. It is thought that with the help of additives is one of the approaches to improve performance of flexible pavements. Here fibres have been used to improve the performance of asphalt mixtures against permanent deformation and fatigue cracking, Because of their inherent compatibility with asphalt cement and excellent mechanical properties. In the present study, an attempt has been made to study the effects of use of a mineral fibre called Glass fibre is used as an additive in Dense Bituminous Macadam (DBM). An experimental study is carried out on conventional bitumen and fibre modified binder. Using Marshall Procedure, Optimum Fibre Content (OFC) and Optimum Binder Content (OBC) for DBM are found respectively. The modified bitumen at Different percentages are subjected to different performance tests like Marshall Stability test and Rutting Properties to evaluate the effects of fibre addition on mix performance.



A Model Sewage Treatment Plant For Rural Area

Bhargavi H K, Saira, Sindhu N & Rajeshwari
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mr. K Narasimha Murthy, Associate Professor

ABSTRACT

India is a country of villages. The number of villages in India as per 2011 census is 597,608 where, 70% population lives in rural area. The rural population have lack of basic facilities. The lack of access to sufficient water and sanitation facilities is one of the largest hindrances towards the sustainable development of the poorest 2.2 billion people in the world. Rural Sanitation in India is a subject of primal concern in the top agendas of GOI (Government of India) for the developmentof the nation. This report focuses on the importance and the current status of rural sanitation in India.Survey has been carried out in selected village to identify the reasons for the lack of sanitation considering various aspects like health aspects. Every year the Union Budget allocates enormous amount of money for the development of rural and health sector but it is not satisfactorily implemented. The present study includes domestic waste water characterization followed by the design ofsewage treatment plant. The sewage treatment plant is quite adequate to receive and treat the domestic waste producing an environmentally-safe effluent.

Using Waste Plastics As A Modifier In Bituminous Concrete Mix

Chandana R,Ravi Shankar K,Rohan Dinesh,Tejas G S & Vinay Kumar A L
Final year BE students, PES college of Engineering, Mandya
GUIDE: Dr.B.S.Jayashankar Babu, Professor

ABSTRACT

Plastic roads are made from the composites of plastics with other material. Plastic roads are different from standard roads which consist of mineral aggregates and asphalt. Plastic roads demonstrate superior characteristics compare to that of regular asphalt roads. They provide better wear resistance and improved life span. Plastic roads would be boon for India's hot and very wet climate. Plastic roads exhibit higher binding strength and are stable even at 50°c.this whole process is very simple and economical. Disposal of waste materials together with waste plastic baggage has become a significant drawback and waste plastics area unit burnt for apparent disposal that cause environmental pollution. Utilization of waste plastic baggage in hydrocarbon combines has tested that these enhance the properties of mix additionally to determination disposal issues. Plastic waste that is cleansed is remove a size specified it passes through 2.36mm sieve victimization shreddingmachine. The aggregate mix is heated and also the plastic is effectively coated over the combination. This plastic waste coated mixture is combined with hot hydrocarbon and also the resulted mix is employed for construction. The utilization of the innovative technology won't solely strengthen the construction however conjointly increase the road life yet as can facilitate to boost the surroundings. Wherever temperatures of cross 50°C and torrential rains producedisturbance, departure most of the roads with massive potholes.

Parametric Analysis On Durability of Bagasse Ash Blended Concrete

Abhishek M
Final year MTech student, PES college of Engineering, Mandya
GUIDE: Mr. Sandeep Kumar D S, Assistant Professor

ABSTRACT

The present study is aimed at utilizing sugarcane bagasse ash concrete, with partial replacement of cement in concrete and its strength and durability performance was checked. The concrete mix is designed for M 30 grade as per IS 10262:2009. The replacement is done at various percentages like 0%, 5%, 10%, 15% and 20% by weight and the concrete mix demands more amount of chemical admixture as the percentage replacement increases in order to attain the desired slump. At room temperature the compressive strength decreases with increase in percentage replacement and was found that at 10% replacement the desired strength of 30 MPa is achieved. Durability tests include sulphuric acid resistance test, sulphate resistance test, Bulk diffusion test and water absorption test. Specimens are subjected to the particular chemical condition for a period of 90 days. From the result obtained from the above tests it showed that 10% replacement of Bagasse ash in concrete shows better result. Finally from the result it can be said that sugarcane bagasse ash is a good pozzolonic material and it can be effectively used as a partial replacement of cement in concrete. Up to 10% SCBA in concrete can be considered as the optimum replacement.

A Performance Study of Rigid Frame,Core And Outrigger Structural System Under Variable Heights As Per Is1893-2016

Rajeshwari M S
Final year MTech student, PES college of Engineering, Mandya
GUIDE: Dr. B S Jayashankar Babu, Professor & HOD

ABSTRACT

In this study considered, performance of rigid frame, core and outrigger structural systems are analysed for seismic load under varying heights of 5, 10, 15 and 20 story at seismic zone II, III, IV and V on soil type III i.e., soft soil. Analysis is carried out by Response spectrum method using E- TABS V18.0.0 evaluation version as per IS 1893-2016. The performance of building is checked by considering parameters such as top story displacement, time period, base shear, bending moment and axial force of column C1, C4 and C27.As the height of the building increases then the necessity of new structural system arises. The objective of the study is to check the performance of rigid frame, core and outrigger structural systems under varying height at all seismic zones. Optimum location of outrigger structural system are discussed. And also an neffort is made to compare the top story displacement and column force results of present work and that of which was carried out as per IS1893-2002.

Experimental Investigation Of Sugarcane Bagasse Ash As A Value Added Material On Compressive Strength Of Masonry Prism

Shubhavinaya A S
Final year MTech student, PES college of Engineering, Mandya
GUIDE:Mr.Lakshmi P S, Assistant Professor

ABSTRACT

Cement is one of the most important construction material used all around the world. Carbon di oxide is the prime contaminant resulting from cement production which enhances green house effect. To bring down this numerous experiments are carried out to get a substitute which can productively replace cement. Some of examples of supplementary cementitious material are fly ash, sugarcane bagasse ash, slag cement and silica fume. In the present work sugarcane is used as a substitute for cement and its properties are figured out.

Sugarcane bagasse ash is a waste produced from the sugar factories. Sugarcane trash, bagasse, bagasse ash and spent wash are obtained during the sugar production process. Constituents of bagasse ash include Cellulose, Hemi cellulose and Lignin.Sugarcane industry uses bagasse generated as a fuel and thus decreasing the disposal volume. This ash generated by burning is called bagasse ash which includes bottom ash and fly ash.The Chemical composition of sugar cane bagasse ash showed that it has higher amount of Silica, Alumina and Iron Oxide. Above mentioned components are responsible for pozzolonic activity of bagasse ash. Sugar cane bagasse ash finds application as fertilizer. Also it is dumped at landfills which have negative impact

Paddy Crop Disease Detection Using Machine Learning

Nisarga M A, Prajwalgowda B S, Rachana M & Shashank S
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mrs. Sahana Raj B S, Assistant Professor

ABSTRACT

Now a day, Farmers are facing loss in crop production due to many reasons one of the major problems for the above issue is crop diseases. This is due to lack of knowledge about the disease and pesticides or insecticides are available to control the disease. But finding the most current disease, appropriate and effective pesticide or insecticide to control the infected disease is difficult and requires experts advise which is time consuming and expensive.

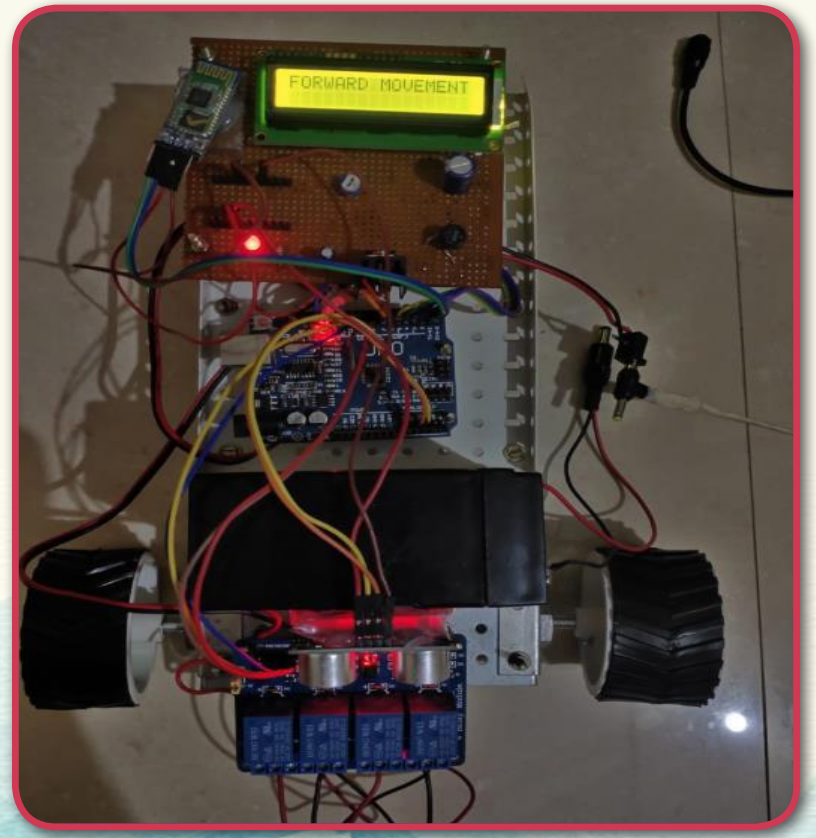
In order to solve the above issue, we are developing a Machine Learning model using Convolutional Neural Network (CNN) algorithm to detect the paddy crop disease using the image and provide the suitable remedy. The remedies provide appropriate information regarding to pesticide or insecticide to be use in order to cure the disease.

Brainwave Controlled Automated Wheelchair

Navyashree M, N Chandana, Madhura B N & Nisha U N
Final year BE students, PES college of Engineering, Mandya
GUIDE: Dr. M B PunithKumar, Professor

ABSTRACT

Many people across the globe are born with one or the other physical disabilities, some of them are born with disabilities which make them difficult for the movement and they need someone's assistance for their movement, finding someone who can assist them all the time is very difficult. So, to overcome this difficulty Wheelchairs using few technologies have been developed in the past to overcome this problem but, completely paralyzed patients feel it difficult to use the technology like joystick, electromyography arm, voice-controlled wheelchair etc. So, in this paper to overcome the limitations of previously existing technologies we have used Electroencephalogram (EEG) signals to operate the wheelchair and this technology is called brain computer interface (BCI) in which the human brain interacts with the computer to perform a particular task. Here eye blinking is used to control the robot as it generates the significant pulse in EEG signals. The first objective of this project is to provide mobility for the completely paralyzed patients. The second objective is to use the EEG signal to control the wheelchair. Hence this robot is programmed in such a way that it takes the EEG signal generated by the eye blinking as commands in a short period of time. In addition to this, the ultrasonic sensors are used to detect any obstacles and to stop the robot thereby ensuring the safety for the users.

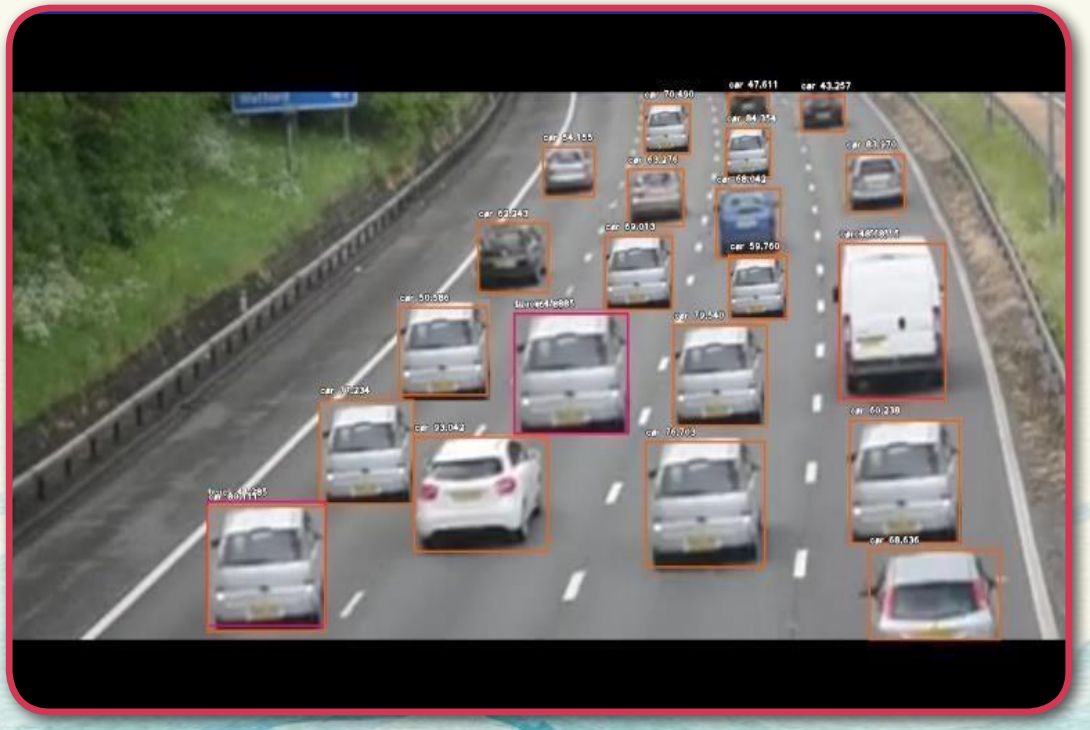


3D Holographic and Traffic Analysis Using Machine Learning

Shubham Verma, Kaniti Sagar, Manoj S & Pooja.S
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mr. Kumar N Krishnamurthy, Assistant Professor

ABSTRACT

Now-a-days roads are monitored by CCTV cameras passively i.e. knowledge is not generated by the CCTV cameras. Human resource constraint i.e. there is very limited posting of the traffic police staff at road crossings and highways. In many cases, accidents are reported due to negligence by the road users. Adding to this, even the majority of humans surrounding the accident spot/scene are busy clicking photos and videos unknown of the fact that their little negligence could cost a LIFE. The footage is only seen by the authorities only after a problem has been occurred so as to find the root cause of it. To overcome this, we propose an intelligent system that can make use of the existing CCTV cameras. The proposed system captures video stream, computes the input and the system alerts are generated in real time, which means no additional sensors would be required. Using camera itself, the plan is to analyse traffic and its density in real time and also send alerts to local police server; so that appropriate resources needed for saving lives are available in time by using Machine Learning and Computer Vision to detect traffic accidents autonomously in a split second. Detecting otherwise unreported accidents will create safer roads and a more efficient system for the civil defense, devoid of human error. Our solution is designed to be as effortless and inexpensive as possible to setup, especially since it will simply run on top of LTA's preexisting, pervasive road CCTV infrastructure. This keeps the costs of this solution very low as it does not require any dramatic paradigm shifts before it can be of use.



Payload Dropping UAV

Sagar Bharadwaj K R, Sumukh S B, Suhaas V N & Suraj J
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mr.Sumanth S, Assistant Professor

ABSTRACT

In a fast-moving world, it is necessary to be able to do things quickly for the sake of oneself or for others. It may be a medical emergency or just another day. Air routes certainly give us an edge in such scenarios, especially with less human intervention. Based on this idea we have built a UAV that is autonomous in nature and capable of delivering payload to assigned location. We divided the project into several stages for our convenience. In the initial stage, we assembled a quadcopter and calibrated some of its components like Electronic Speed Controller (ESC), compass using mission planner. Next stage involved a successful flight of the quadcopter followed by making the quadcopter autonomous in nature using mission planner software. Finally, with the help of servo motors we built a system capable of performing pay-load delivery mechanism.

Crop Prediction Using Machine Learning Approaches

Ashwini, Mahendra N, Manju Raju M R & Danush Vishwakarma
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mrs. Nischitha K, Assistant Professor

ABSTRACT

As we know the fact that, India is the second largest population country in the world and majority of people in India have agriculture as their occupation. Farmers are growing same crops repeatedly without trying new verity of crops and they are applying fertilizers in random quantity without knowing the deficient content and quantity. So, this is directly affecting on crop yield and also causes the soil acidification and damages the top layer. So, we have designed the system using machine learning algorithms for betterment of farmers.

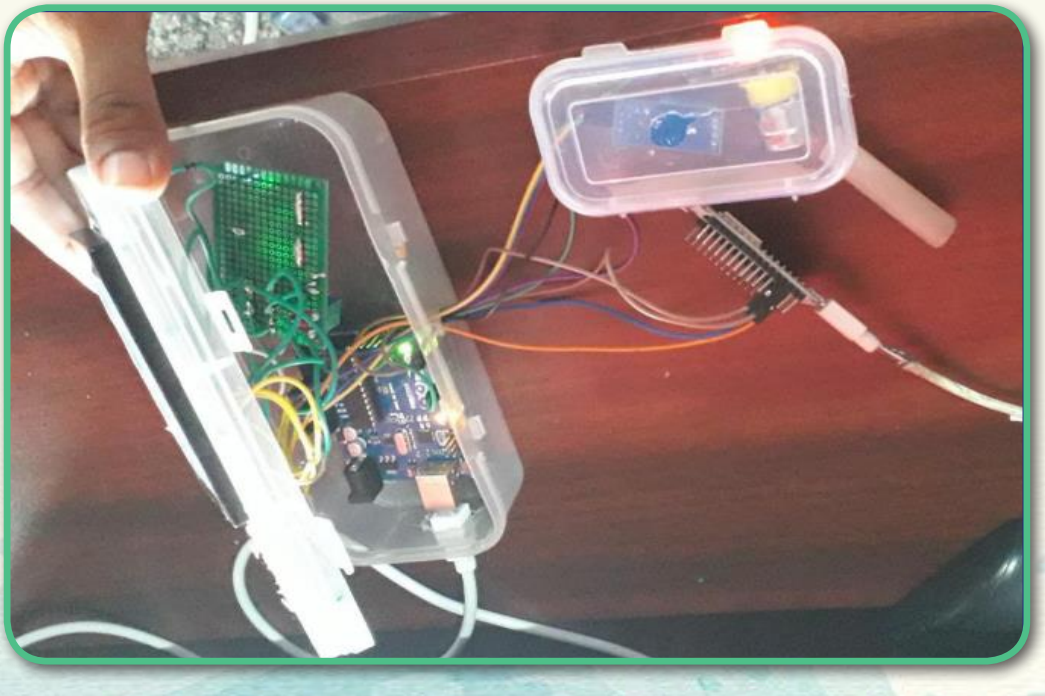
Our system will suggest the best suitable crop for particular land based on content and weather parameters. And also, the system provides information about the required content and quantity of fertilizers, required seeds for cultivation. Hence by utilizing our system farmers can cultivate a new variety of crop, may increase in profit margin and can avoid soil pollution

IOT Based Asthma Detection and Diabetes Detection Using Machine Learning Algorithms

Rakshitha G V
Final year MTech student, PES college of Engineering, Mandya
GUIDE: Dr.Ananda M J, Associate Professor

ABSTRACT

Asthma Is A Non Curable Disease, Using Breath Sample Asthma Can Be Detected. Liquid Crystal Display Used For Displaying The Range Blood Glucose Level. Normal Range Of Co2 Sensor Is 23 To 29 Meq/L . Sensors Using To Detect Co2 In Breath Using MG811. This Paper Presents A Portable And Patient Independent Respiratory Co2 Monitoring Device For Early Screening Of Asthma. Further The Computation And Transmission Algorithm Was Developed To Process And Display The Co2 Signal On Lcd. The Information Can Be Accessed Anywhere Which Allows The Users To Know Elements About Risk Condition For Their Respiratory Health. Diabetes Mellitus Is Considered As One Of The Most Dangerous Disease It Can Leads A Person To Several Complications. Normal Range Of Blood Glucose Level Is 70 Mg/Dl -130 Mg/Dl(Fasting) And Less Than 180 Mg/Dl (After Meal). The Presentation Investigation Is As Far As The Exactness Rate Of All The Grouping Procedures Such As Logistic Regression Support Vector Machine K- Nearest Neighbor Random Forest Naive Bayes Theorem Gradient Boosting The Classifier. Random Forest Has The Highest Accuracy 98% And Roc_Auc Curve 97%. Model Can Be Improve More If We Take The Same Count Of The Labels. In This Model 30% Is A Diabetic And 70% No Diabetic Patient. Model Can Be Improve With A Fine Tunning.



A Smart Water Dispenser based on Plastic Recycling

Kumar B R
Final year MTech student, PES college of Engineering, Mandya
GUIDE: Mrs. B. S. Nanda, Assistant Professor

ABSTRACT

Water has become the most business results of the century. The Stress on the various water assets is a consequence of numerous components. From one viewpoint, the rapidly rising masses and changing lifestyles have extended the prerequisite for fresh water. In case open entryway costs were thought of it as, would be obvious that in most nation locales, nuclear families are paying unquestionably more for water supply than the every now and again run of the mill rates charged in urban zones. Likewise, if these expenses of bringing water this is practically comparable. Presently a day's allocators are accessible and worked on just one coin. However, the point of this undertaking a shrewd water container dependent on plastic reusing process the need of manual works to isolate plastic waste. Which is regularly tedious the greater part of the waste gets untreated which passes significant risk to condition.

Decoding Innovation

| **Parul Pandey**

Innovation in very basic term translates to a new idea, device or method. The idea can be extremely novice or an improvement upon any existing solution. “INNOVATION”, the very word itself is the talk of the town today. Enterprises are encouraging employees to innovate continuously and, vigorously. The Motto Perform Or Perish has been aptly modified into Innovate Or Perish. Business houses today want to innovate either to stay in race or to remove others’ from the race. This is where the whole purpose of Innovation & creativity stands defeated. David O Adefe has rightly quoted that: “Never innovate to compete, innovate to change the rules of the game”.

Innovation should also be focused around the customer. True innovation is coming up with a product that the customer didn’t even know they needed. After all customer is the KING!

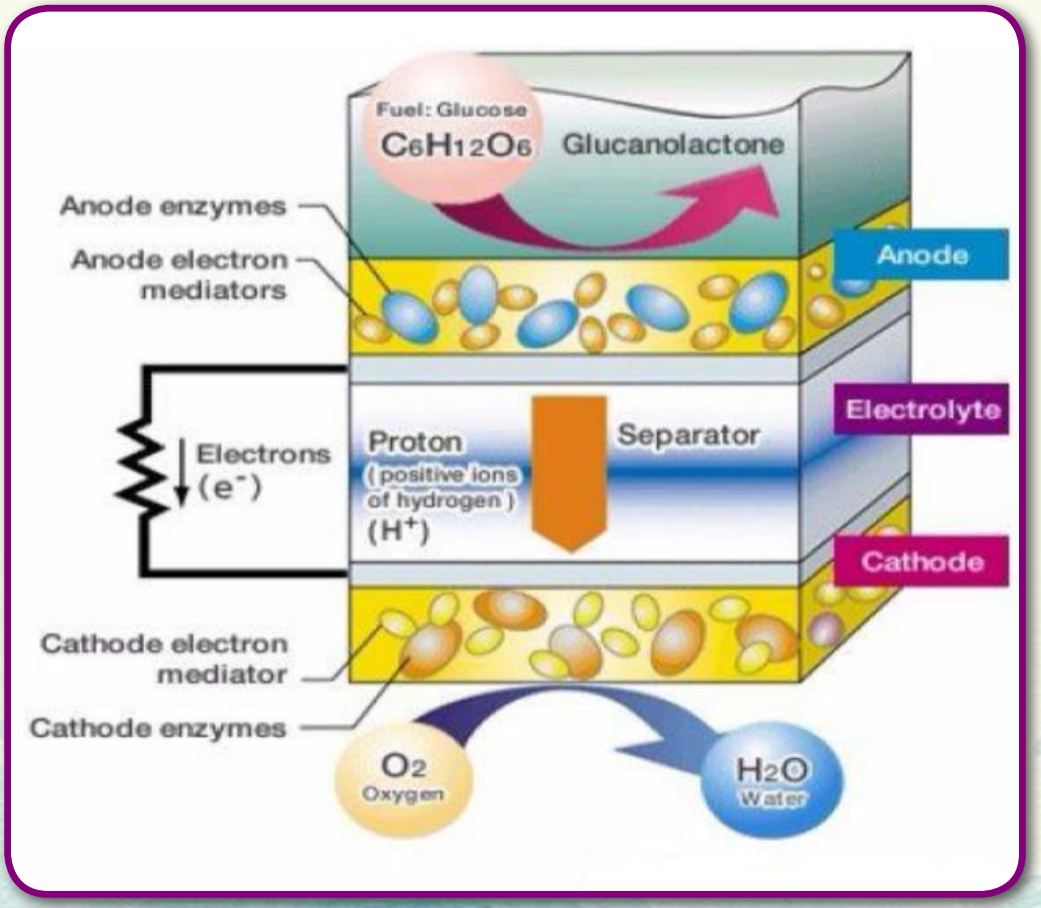
Lastly and the most vital point, we need brains behind creative thinking and problem solving. The brains needn’t be of Einstein or Aryabhatta, but of highly self-motivated individuals who aspire for a change. Simply by throwing ideas at the white board in a meeting that comprises of highly demotivated individuals would be the death of creativity. To achieve success, companies need to promote a culture of creative thinking in first place, which will develop a sense of reasoning, ultimately changing the outlook of the employees’ towards any problem. Only them meaningful innovations will be born.

Fabrication of Bio Chemical Battery For Home Automation

Chandini P R, Harshitha S, Jayasurya J & K Lakshmana
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mr. D M Srinivasa, Assistant Professor

ABSTRACT

A battery is an electrical device which is used to alter the chemical energy to electrical energy. Batteries are classified into different types based on the application and these are used in several electrical as well as electronic devices. An electrical battery includes certain chemicals like compounds of mercury, lead etc. and the lead of a battery is extremely dangerous in nature and is not environment-friendly. Apart from these, there is a chance for chemical leakage as well as the explosion of the battery in certain cases. In this paper to overcome the problem of chemical leakage and explosion of battery, a Bio-battery is fabricated which reduces the impact of these chemicals in turn reduces the harm to the environment which gives a great advantage to humans. The objective of the paper is to highlight fabrication of an eco friendly battery based on bio chemical energy production and to build IOT based home automation system using bio batteries.

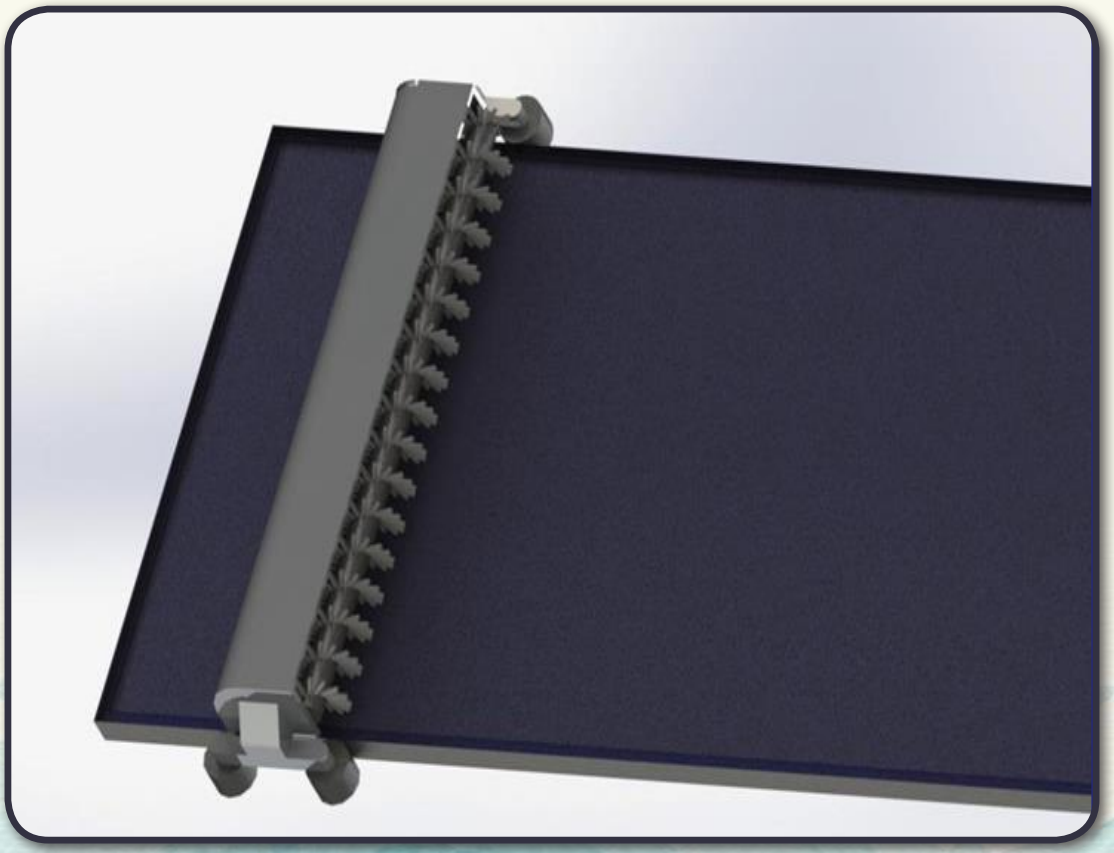


Automatic Solar Panel Cleaning Robot

Ajmalshariff, Akashrp, Arshadahmed & Ifthekharahmed
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mr.B N Harish, Assistant Professor

ABSTRACT

Nowadays, Solar energy is the most abundant source of energy for all the forms of life on the planet Earth. It is also the basic source of energy which is largely available everywhere. But the solar technology has not matured to the extent of the conventional sources of energy. It faces lots of challenges such as high initial cost, erratic and unpredictable in nature, need for storage and low efficiency. This project aims at increasing the efficiency of solar power plants by solving the problem of accumulation of dust on the surface of solar panel which leads to reduction in plant output and overall plant efficiency. It proposes to develop a Solar Panel Cleaning System which could remove the accumulated dust on its surface on a regular basis and maintain the solar power plant output. The system is a robotic system which could move autonomously on the surface of solar panels by the help of DC motors and uses dry method for cleaning such as rotating cylindrical brush keeping in mind the limited availability of water in areas where such plants are mainly located. This project also aims to reduce the human involvement in the process of solar panel cleaning as it is a very hazardous environment for them in scorching sun.



Arduino Based Earthquake Detector Using Accelerometer

Adharsh P, Aishwarya D, Anupam R & Arpitha M D
Final year BE students, PES college of Engineering, Mandya
GUIDE: Dr.Gopiya Naik, Associate Professor & HOD

ABSTRACT

An Earthquake (also known as a tremor or temblor) is the result of sudden release of energy in the Earth's crust that creates seismic waves. Earthquakes are recorded with a seismometer, also known as a seismograph. The moment magnitude of an earthquake is conventionally reported, or the related and mostly obsolete Richter magnitude, with magnitude 3 or lower earthquakes being mostly imperceptible and magnitude 7 causing serious damage over large areas. Intensity of shaking is measured on the modified Mercalli scale. This work presents an Arduino based Earthquake Detection using Sensing Element accelerometer to reduce its destructive losses.

Modification of Conventional Two Wheeler To Hybrid Two Wheeler

Neelambika M, Prajwal T R, Ganesha R & Sathyalakshmi S
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mr. Srinath M S, Assistant Professor

ABSTRACT

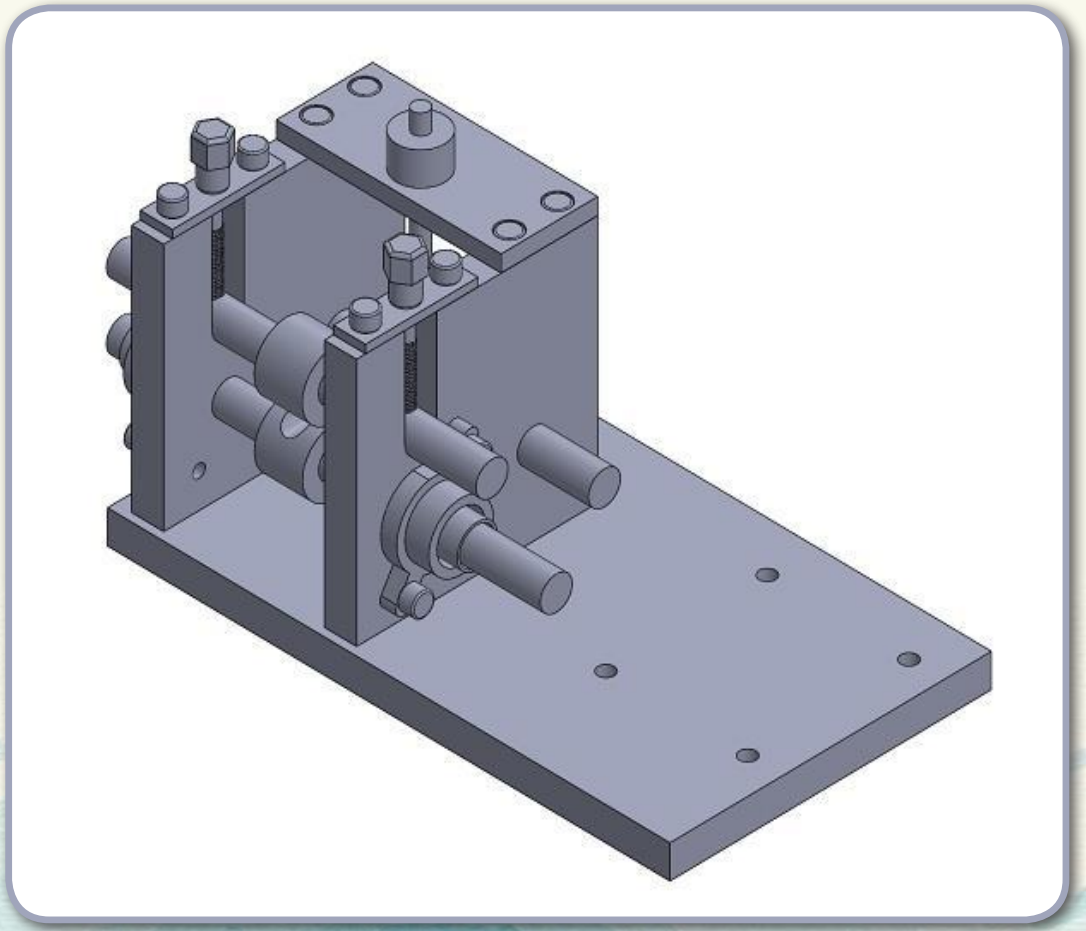
The current world scenario is such that fossil fuels have become scarce than ever and alternatives to fossil fuels have become a necessity rather than an option. Hybrids, as such, have become the bridge between the usage of fossil fuels and the electric future. Hybrids have been around for over a decade, but in the form of four wheelers. Implementation of hybrids in two wheelers has been challenging and no definite solution has surfaced as of yet. Construction of a plausible hybrid system that comes at a very low expense on the existing commercially accepted combustion vehicles is a problem at the forefront of major automotive giants. The traditional internal combustion engine made economic sense when oil was cheap and plentiful and the effects of burning fossil fuels and pollution were not understood. The environmental damage from internal combustion engine is compounded by the problem of air pollution. The concern over the environment with respect to pollution, conservation of fuel resources in the world, the automotive industry has entered into a new dimension in production of more fuel efficient, low emission vehicles and new technologies. One of the greatest innovations is Hybrid Electric Vehicle (HEV). The hybrid electric vehicle consists of two or more energy sources for total propulsion of the vehicle. In this paper, two independent propulsions, ICE and electric motor are independently operated for combined effort derivation in total propulsion of the vehicle. The Combined effort of ICE and Electric motor in propelling the vehicle more suitable for country like India is being analysed in this paper. The ICE will be active in initial pickup and electric motor acts as supportive propulsion deriver.

Design and Fabrication of Wire Peeling Machine

Fabin Jenisha. J, Poornima P, Ravi kumar. S & Sachin. R
Final year BE students, PES college of Engineering, Mandya
GUIDE: Dr.Shivakumar B S, Professor

ABSTRACT

The aim of this project is to produce the mechanical design of a semi-automatic machine for manufacturing segments of heavy gauge insulated electrical wire. Semi-Automatic Cable Stripper is a machine to separate core from coaxial cable. In this project work, the mechanism of cable stripper is investigated to study its application from existing machines. The suitable equipment and material were identified for the application of stripping the cable. The relevant information was analized to know the size of cable and speed of motor that is used in stripping process. The relationship is made for different size of cable. The stripper machine is designed using computer aided design (CAD) software to produce a 3D model of the machine.

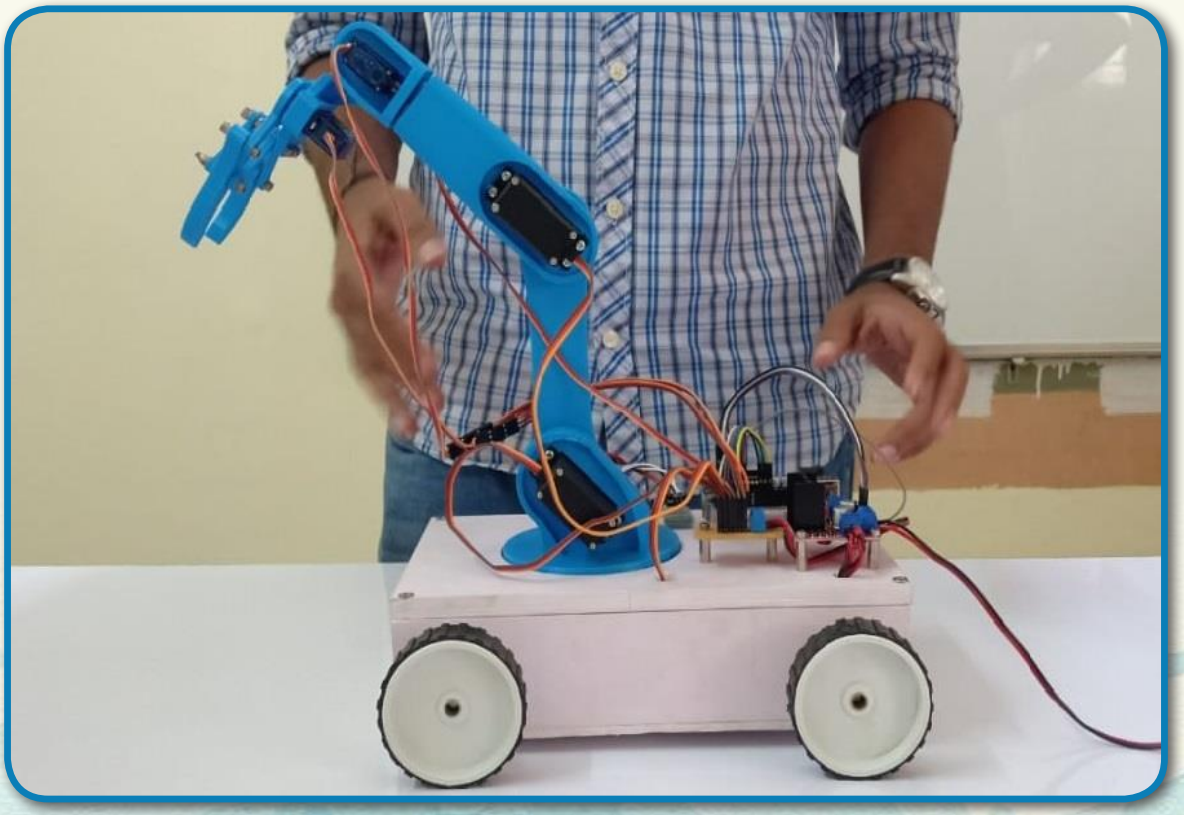


Design and Developing the 3D model of Arduino Controlled Robot Arm

Karthik. M, Sujanashraya, Sunita Mallikarjun Nalatwad & Swaroop. T. R
Final year BE students, PES college of Engineering, Mandya
GUIDE: Dr. N. L. Muralikrishna, Professor

ABSTRACT

Robotic arm is a mechanical arm to perform the desired task. In recent years the industry and daily routine works are found to be more attracted and implemented through automation via Robots. The pick and place robot is one of the technologies in manufacturing industries which is designed to perform pick and place operations. The system is to designed that it eliminates the human error and human intervention to get more precise work. Every industrialist cannot afford to transform his unit from manual to semi-automatic or fully automatic as automation is not that cheap in India. Automation is playing a major role in all the fields and also helping in reducing the time and work. Arduino is an open source hardware and software company, project and user community that designs and manufactures single board microcontrollers and microcontroller kits for building digital devices. The basic objective of this project is to develop a versatile robotic arm which can be utilized for Pick and Place operation. Here controlling of the robot has been done by using servo drives and arduino microcontroller.

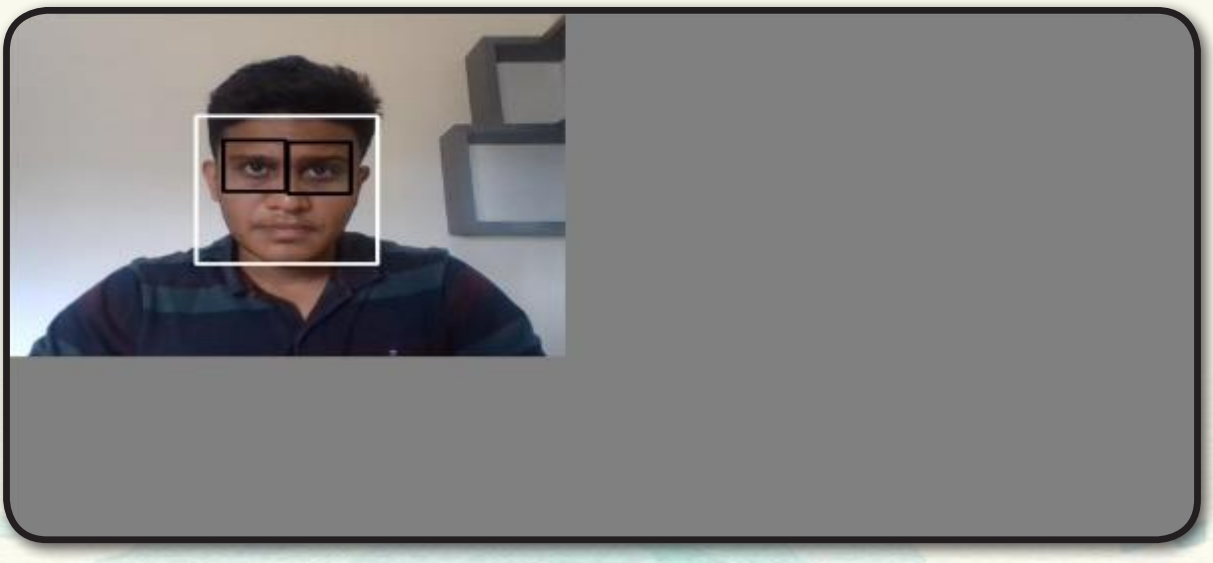


Vision-Based Text Entry Using Morse Code Generated By Eye Gestures

Adarsh S Koundinya,Gowtham S , Prathik R & Sai S Poojitha
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mrs. Geethanjali T M , Assistant Professor

ABSTRACT

Every year more than one in hundred people over the age of 65 suffer from cerebrovascular accidents (CVA) or stroke. People with such infirmities have circumscribed body movements and are often unable to speak or communicate verbally, even worse some are affected by locked-in syndrome (LIS) where disabled person couldn't move any of his/her voluntary muscles in the body except for vertical eye movements and blinking. This project is proposed to help hundreds of people suffering from cerebrovascular accidents (CVA) or stroke. People suffering from these infirmities have circumscribed body movements and are often able to communicate verbally. We targeting the only functional part in their body to help them communicate verbally through eye gestures. This comprises a camera to acknowledge the simple gestures made by eye's, which are interpreted as "dots" and "dashes" of morse code.

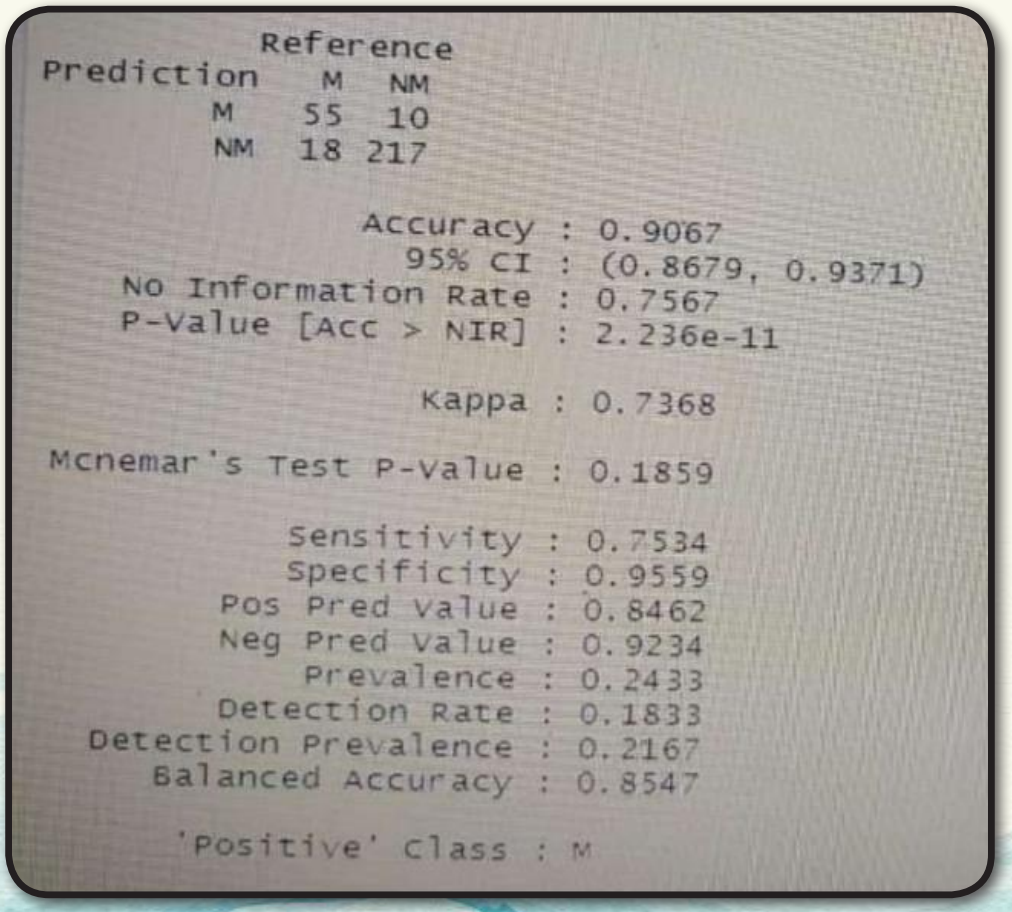


Classifying Twitter Data Into Medical And Non-Medical Data

Pratheeksha H P, Dhanush P A, Supriya S &Poornima G
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mr.Bramesh S M, Assistant Professor

ABSTRACT

Nowadays, Twitter media users share their medical-related interests, opinions, knowledge of millions of persons worldwide. Hence there is a need to detect or identify medical-related data in Twitter for filtering purposes. The research shows that this classification task is very difficult because most of which were noisy enough to affect the accuracy. Hence our goal is to collect a stream of tweets T = $\{t_1, t_2, ..., t_n\}$ using Twitter API and to train a Naive Bayes classifier to classify each tweet into one of two classes (Medical and Non-Medical). Performance evaluation is carried out on a large dataset which includes around 3000 tweets and also the classifier results are examined from multiple perspectives and summarized to provide usefulness of the classifier.



```
          Reference
Prediction   M  NM
        M   55  10
        NM  18 217

               Accuracy : 0.9067
                 95% CI : (0.8679, 0.9371)
    No Information Rate : 0.7567
    P-Value [Acc > NIR] : 2.236e-11

                  Kappa : 0.7368

 Mcnemar's Test P-Value : 0.1859

            Sensitivity : 0.7534
            Specificity : 0.9559
         Pos Pred Value : 0.8462
         Neg Pred Value : 0.9234
             Prevalence : 0.2433
         Detection Rate : 0.1833
   Detection Prevalence : 0.2167
      Balanced Accuracy : 0.8547

       'Positive' Class : M
```

Design And Fabrication of Patient Lifter

Omkar I K , Prabhushankar M , Prajwal & Prajwal S P
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mr.Ramesh kurbet, Assistant Professor

ABSTRACT

A Patient Lifter may be either a sling lift or sit-to-stand lift. This is an assistive device that allows patients in hospitals and nursing homes and people receiving home health care to be transferred between a bed and a chair or other similar resting places, by the use of hydraulic power. Patient lifters are used for patientswhose mobility is limited. Patient lifter are mobile (or floor) lifts or overhead lifts(suspended from ceiling, wall-mounted or overhead tracks).

The Patient lifter has several advantages. It allows heavy patients to be transferred while decreasing stress on caregivers while also reducing the number of nursing staff required to move patients. It also reduces the chance of orthopedic injury from lifting patients.

Design And Analysis of Electric Go – Kart

Yashas N Raj , Yashwanth Gowda K S , Yogendra H S & Shashank R Gowda
Final year BE students, PES college of Engineering, Mandya
GUIDE: Dr.Mahendra Babu K.J., Assistant Professor

ABSTRACT

We have designed and analysed a GO - KART which runs on electrical energy. The primary objective is to design a stable and safest vehicle for the driver which purely runs on electric current thus eliminating the fuel use and making it eco-friendly. The frame is obtained by following the Indian Electric Go-Kart Race rule book which ensures optimum use of materials and high strength due to more number of triangular joints. We have used AUTOCAD to develop 2D model. The 3D model is developed using SOLID WORKS because of its advantages. Finite Element Analysis is carried out on the frame for three different materials i.e., aluminium, mild steel and carbon fibre reinforced polymer (CFRP). The frame is subjected to front, side and rear impact and is analysed in ANSYS R18.2, to ensure that the frame is durable and structurally rigid to withstand the impacts while in the state of rest and motion. Design of the frame consists of numerous factors like material selection, pipe size selection, safety of the driver, weight reduction, size and cost. The pipe size determines the strength and load carrying capacity of the vehicle. The centre of gravity is kept as low as possible to obtain maximum stability. Based on the result obtained from the above tests the design is modified accordingly. The length of the vehicle is kept minimum so as to reduce the weight of the vehicle. The wheelbase and track width of the vehicle are chosen accordingly.

A Study On Mechanical Properties of Glass Fibre Reinforced Polyester Composite Material

Anjan K A, Koushik , Ramdasnaik P & Sachin C
Final year BE students, PES college of Engineering, Mandya
GUIDE: Dr.Anilkumar S V, Assistant Professor

ABSTRACT

Composite materials are one of the most significant inventions of the material science. Composites are a versatile and valuable family of materials that can be used in many fields with high quality and low cost applications. This project exhibits an outline on glass fibre and its composites utilized as a part or of different commercial and engineering applications. It helps to provide details about the potential use of glass fibre and its composite materials, mechanical and physical properties and some of their applications in engineering sectors. The primary objective of this project work is to analyse the effect of fibre loading and orientation on tensile strength, impact strength and hardness polymeric composite material. In this project the polyester is used as resin and Cobalt naphthanate as a catalyst, both are mixed in a proper proportion with suitable hardener MEKP (Methyl Ethyl Ketone Peroxide) and used as a matrix. The Glass Fibre reinforced polyester composite material is prepared using Hand Lay-up technique with three different fibre loadings (10, 20, and 30 wt.%) and at two different fibre orientations (30% and 60%). The composite material is then cut as per the ASTM standards and subjected to Tensile, Impact and Hardness tests and results are analysed.

Modeling, Meshing And Analysis of Casing And Stator of A Twin Spool Turbofan Engine

Likhith S , Mohammed Hashim, Nandish P & Rakshitha G B
Final year BE students, PES college of Engineering, Mandya
GUIDE: Ullas Nandan Kumar A S, Assistant Professor

ABSTRACT

The optimal design of aero engine gas turbines essentially involves the study of dynamic behavior of the engine. In this work the dynamic characteristics of a typical twin spool turbofan engine's stator and casing are studied. The stator and casing system is modeled and meshed in ANSYS. Eight node Fourier multiharmonic elements are used to mesh the areas. The mass of the vanes of the actual engine and the present model are matched using equivalent density. The first ten natural frequencies and mode shapes are estimated from modal analysis. The sensitivity of natural frequencies to the number of nodal planes considered is studied.

Characteristics Evaluation Of Mechanical Properties Of Hybrid Bio Composites Fabricated With Hand Layup Technique

Kumara M , Naveen N , Nikhil V N & Nikhilkumar T S
Final year BE students, PES college of Engineering, Mandya
GUIDE: Dr. Sadashiva M, Assistant Professor

ABSTRACT

Bio-composites are finding applications in many fields ranging from the construction industry to the automotive industry, so this project concentrated on synthesized and characterized by hybrid bio composites. Eco-friendly biodegradable bio-composites were prepared using reinforcement like fiber as sisal fiber and jute fiber along with matrix as rain tree resin as matrix material by using the hand layup technique with different combination.The water retting process adapted to extracts the fibers from raw.

The project was emphases to investigate the properties of the sisal and jute fibers subjected to different tests. The experimental results found that the properties of the composite of the combination of both sisal and jute fiber is more as compared to sisal composite and jute composite. From the four tests the hardness test, tensile test, flexural test and impact test the mechanical properties is more in the combination of sisal and jute fiber composite as compared to the sisal composite and jute composite. Overall using the combination of both sisal and jute in composite gives good mechanical properties.

Design And Fabrication of Forest Fire Detection Robot

Abdul Zubair, Bharath S, Harsha P & Syed Muheen
Final year BE students, PES college of Engineering, Mandya
GUIDE: Mr.K N Pavan, Assistant Professor

ABSTRACT

The rocker-bogie suspension mechanism it's currently NASA's favored design for wheeled mobile robots, mainly because it has robust capabilities to deal with obstacles and because it uniformly distributes the payload over its 6 wheels at all times. Even though it has many advantages when dealing with obstacles, there is one major shortcoming which is its low average speed of operation, making the rocker-bogie system not suitable for situations where high-speed traversal over hard-flat surfaces is needed to cover large areas in short periods of time, mainly due to stability problems. Our propose is to incorporate rocker bogie mechanism and control the forest fire at the early stages along with surveillance, Data collection of various variables which have an important impact in forest fire occurrence.

The Rocker-Bogie Mobility system was designed to be used on uneven surfaces. It is capable of overcoming obstacles that are on the order of the size of a wheel. The main reason of selecting rocker-bogie vehicle so that it can effectively step over most obstacles rather than impacting and climbing over them. Most of the benefits of this method can be achieved without any mechanical modification to existing designs – only a change in control strategy, along with the usage of sensors, transmitter and receivers which enables for monitoring the rover from far distance and helps to overcome the effects of forest fire and prevention of wildlife and natural resources.

11.3 Working:

1. The operator sees a potential forest fire, then he analyses the need of the fire.
2. If no need is seen, then he sends a signal to activate the fire extinguisher system through a RC Transmitter.
3. A RC receiver a signal at the receiving end of the rover.
4. It then activates the relay module to switch ON.
5. The water pump is connected to the relay hence it is switched ON.
6. A spray nozzle is attached to the output of the pump, this it sprays water on the fire extinguishing the fire.
7. After this the operator sends an OFF signal to turn OFF the system.

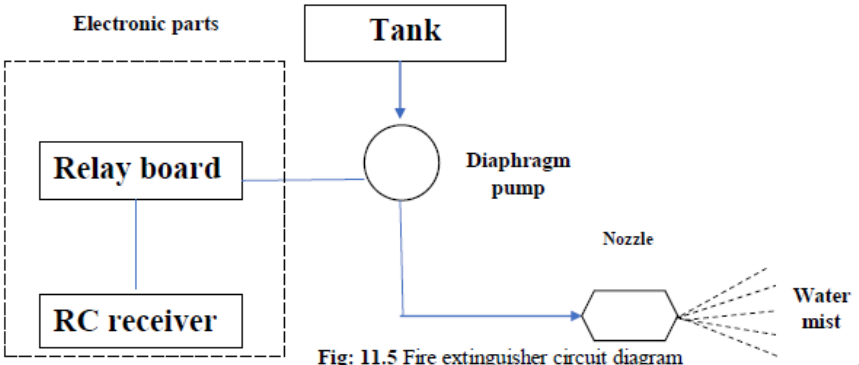


Fig: 11.5 Fire extinguisher circuit diagram

Fabrication And Study of Mechanical Properties of Copper Oxide Reinforced Aluminium Based Metal Matrix Nanocomposite

Mahadevaiah K E
Final year BE students, PES college of Engineering, Mandya
GUIDE: Dr. S Ghanaraja, Professor

ABSTRACT

Nanocomposite is a solid multi-phase material of less than 100 nanometers (nm) or nano-scale structures in one, two or three dimensions that represent distances between the various phases that make up the material. A large class of materials, with microstructures in length scales of less than 100 nm modulated in zero to three dimensions. Materials of atoms structured in nano sized clusters that are the material's constituent grains, or building blocks. Any substance within 1-100 nm range, having at least one dimension. The constituents have at least one dimension in the nanometer-scale.

Nanocomposites can typically be classified into four groups, based on the various forms of matrix materials, including nanocomposites based on polymer, carbon, metal and ceramic. Polymer nanocomposites (PNCs) are composites of polymers used as reinforcements for nanostructured materials. In the nanocomposite development process, each of the distinct steps is a mixture of structure and property to create hybrid materials with multifunctional structures and material properties. The advent of modern nanotechnology materials and characterization techniques has paved the way for the current concept of next-generation nanocomposites that are not only conveniently controllable but also have many inherent engineering functionalities.Materials fortifying are typically stiff with small densities, whereas the matrix is usually ductile or rough. If the composite is constructed and assembled correctly, the strength of the structure is combined with the durability of the matrix to achieve a variety of attractive properties that are not found in any single typical material.

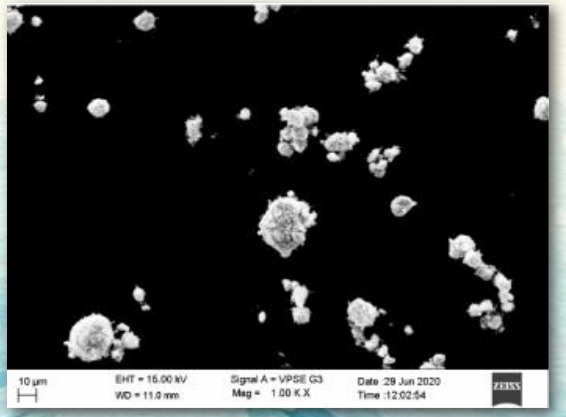
Nanoscience is a nanometer-sized analysis of phenomena. The Nanometer Scale is commonly indicated as 1-100 nm. The fundamental properties of materials such as their melting point, magnetic properties, charge capacity and even their colour can be controlled by creating nanoparticles, without altering the structure of the substance. The surface area per unit volume for particles and fibers is inversely proportional to the width of the material, and the greater the distance, the better the region per unit volume.Nanomaterials are not the only smaller materials there are other materials, such as electrons, atoms and certain molecules, which are much smaller than a nanometer. They are basically in between the very small atomic regime and the bigger microparticles and colloids regime.

Nanocomposites are the materials in which at least one nano sized material in at least one dimension should be present. Such nanocomposites have the improved properties of both components when compared to the individual component materials by synergetic effect. Such nanocomposites are of different forms depending on the main component (compositionally more amounts) which is the continuous phase called the dispersed phase as matrix and filler component (compositionally less).

Aluminum is now the second-largest metal after iron in the world. That is because aluminum has a remarkable mix of favorable properties such as low weight , high strength, outstanding malleability, quick machining, exceptional corrosion tolerance, and good aluminum thermal and electrical conductivity. Recycling aluminium is also quite easy. A combination of two or more materials (reinforcing elements, fillers, and matrix binder composite), which differ in form or structure on a macro-scale. The members maintain their personalities, that is, when they behave in concert, they do not break or fuse entirely into one another. The elements may usually be physically defined and an interaction displayed with each other. Sources of these are composites of cermet and metal matrix. Materials constitute the fundamental aspect of both natural and manmade structures. Any material consisting of two or more components with separate properties and distinct borders between the components may typically be called a composite. Moreover, the idea of mixing multiple components has been utilized by man for thousands of years to construct a material with properties that are not attainable with the individual components. Many natural material that has formed as a consequence of a lengthy period of development may also be used as hybrid materials. Quick all the products that we see around us are composite. Many of these are natural composites, such as trees, bones, stones, etc., because they are either produced in nature or developed by natural processes.

As for microcomposites, nanocomposites such as Ceramic Matrix Nanocomposites (CMNC); Metal Matrix Nanocomposites (MMNC); and Polymer Matrix Nanocomposites (PMNC); can be classified into three separate groups according to their matrix properties. Nanocomposite systems have been widely studied since the 1990s, including those strengthened with CNTs, and subsequently the numeral of publications on the subject, including reviews from time to time, has gradually and consistently grown; Metal matrix composites based on aluminum are made using a variety of techniques including liquid metallurgy, powder metallurgy, diffusion bonding, and spray forming. Liquid metallurgy is inexpensive over the powder metallurgy road, which is useful in mass manufacturing. This research aims to produce composites reinforced by Al and Mg matrix, Nano CuO by stir casting and examination of the mechanical properties. The microstructure of generated composites was performed using Optical Microscopy, and through hardness and tensile testing the mechanical properties of scanning electron microscopy were calculated.

The present research includes composite synthesis by applying nano-CuO particles to the molten alloy during the stirring process. The goal of developing composites through stir casting in this research is to investigate their potential for use in structural components, and hence the mechanical properties of such composites are essential for this analysis. In keeping with the observed mechanical properties calculated in terms of hardness and tensile strength, attempts are made to understand composite microstructures such as particle distribution and porosity defects.



Effect of Various Wire Electrode Materials on the Performance of Wire Electrical Discharge Machining of Al/Sic Composite Material

Anil Kumar M N
Final year M.Tech student, PES college of Engineering, Mandya
GUIDE: Dr. Gurupavan H R, Assistant Professor

ABSTRACT

Advancement in science and technology increases the sharp world demand for multifunctional advance material in manufacturing industries. Composite materials are one of that advanced materials. Composites have unprecedented mechanical and physical properties that can be tailored to meet the requirement of a particular application. The development of automotive and electronic industries across the globe is anticipated to create a demand for MMC. The development of aerospace segment the MMC global demand will probably be steady in the future because of the positive trend in aerospace industries. Metal matrix material is one of the most commonly used composite materials in manufacturing strong light weight and complex machining components especially in aerospace and marine industries. Composite materials are difficult machining in conventional methods because of strong and hard abrasive reinforcement materials. Tool wear rate is more and machining time is unpredictable and difficult to achieve good dimensional accuracy in machining of composites in conventional methods. There are far greater demands for higher precision in machining, ease of operation, and increased longevity of both the parts, and the machines that make them. CNC Wire EDM can satisfy and meet all these needs. The precision machining of complex geometry's can be easily accomplished with minimal operations. All these drawbacks lead to invention of non-traditional method of manufacturing,

Wire EDM is an emerging technique to manufacture components with intricate shapes and complex profiles regardless of hardness, from relatively common materials such as tool steel, aluminium, copper, graphite, inconel, titanium and conductive ceramics. It has revolutionized the tool and die, mold and metalworking industries. Many experimental investigations have been carried out to study the effect of process parameters on process performance characteristics of WEDM: surface roughness (Ra), wire wear rate (WWR) and material removal rate (MRR) during WEDM of different alloys and composites. Wire electrodes used in WEDM are the core of the system, electrically charged copper, Molybdenum, brass, diffused annealed, coated, tungsten wire is used as an electrode to cut electrically conductive materials. Technology of the WEDM process is based on the conventional EDM sparking phenomenon utilizing the widely accepted non-contact technique of material removal with a difference that spark is generated at the wire and workpiece gap.

Surface roughness means microcosmic geometry shape characteristic composed of minor spaces, peaks and valleys in the machining surface. It directly influences machine and instrument's service performance and life, especially makes important sense to products with high running

speed, fabrication precision and tightness request. Therefore, surface roughness measuring technique takes a very important place in engineering field.

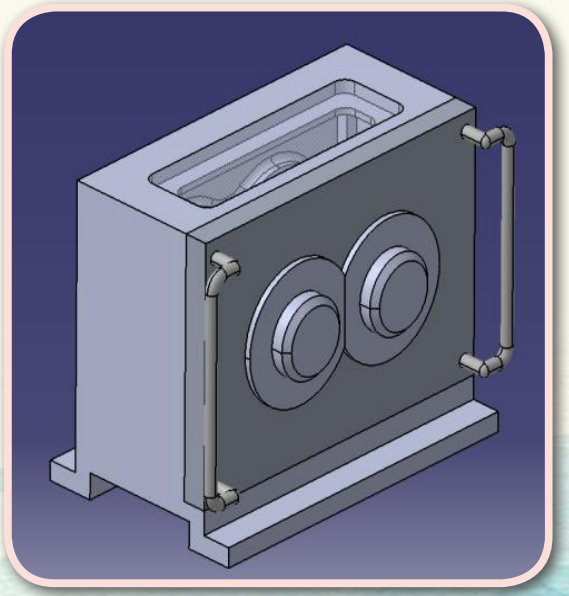
The surface structure, especially the roughness, has a significant influence on numerous parameters and therefore estimates the quality of machining processes. Recent decades many surface measurement techniques are used to measure surface roughness values. The present work aims at the measurement and evaluation of the surface roughness electrode wear, dimensional accuracy and machining time in WEDM while machining of the aluminium based metal matrix composites using brass and molybdenum wire. The surface of Wire Electric Discharge Machined components is measured by using hand surf surface measurement instrument. Surface finish of the machined component is depending on wire wear. Wire wear can be measured by using low force micrometer. Machining time can be compared in different wire materials and machining time can be measured in machine itself. Dimensional accuracy can also be measured by using digital micrometer of range 0-25mm. Wire electrode is the core of the WEDM, to achieve desired quality of the product selection of the wire material also plays a significant role. The wire materials having different physical properties such as electrical conductivity, thermal conductivity, heat resistant capacity, low calorification etc, creates a significant effect on the performance of the machining process. The present work considered to compare the effects of molybdenum wire electrode and Brass wire electrode on the performance parameters such as Surface roughness, Electrode wear, Dimensional accuracy and Machining Time while machining MMC's in WEDM to choose the best wire electrode material for machining MMC's. The present works helpful to industries to choose best alternative material for specific requirement of particular application. In industries cost of machining, machining time, machining of components accurately with less expense and competitive to global market are more important. This research works helps to industries to select best combination of input parameters and wire electrode material in wire EDM to machining the composite material economically, accurately.

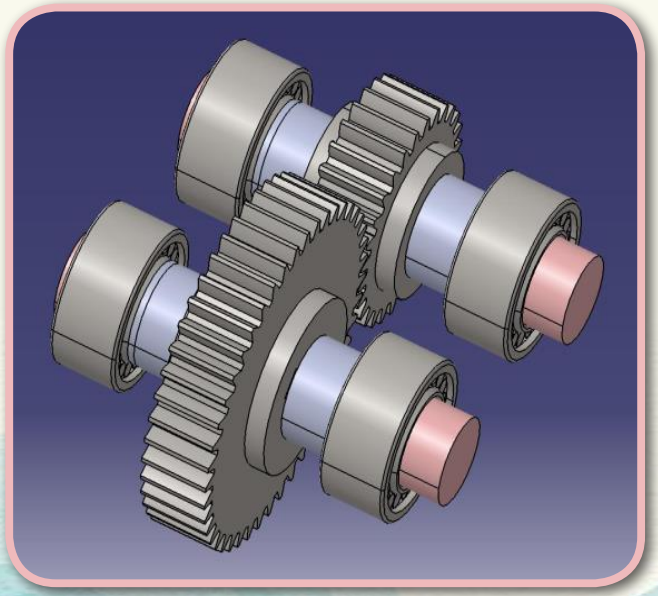
Vibration And Noise Signal Analysis To Detect The Gear Teeth Damage In A Gearbox With Austempered Ductile Iron As Gear Material

P Raghava Madhyastha
Final year M.Tech student, PES college of Engineering, Mandya
GUIDE: Dr S.L. Ajit Prasad, Professor

ABSTRACT

The gearbox is the primary tool of power transmission. The efficiency and smooth working of the gearbox are necessary to maximize the performance of the machine. But like any mechanical component it can fail. So, the gearbox is put under condition monitoring for finding signs of failure. The purpose of this project is to conduct vibration, sound and order analysis of the gearbox with austempered ductile iron gear. The data for this experiment are gathered by using DAQ. The procedure for monitoring the gearbox is to take vibration, sound and order tracking for new healthy gear and keep it as a standard or as reference. When a faulty gear is in the gearbox the vibration, sound and order change its pattern when compared to the healthy gear. By studying these patterns, I can deduce the type of failure. A major such defect is breakage of teeth. I can determine the defect buy studying the gearbox's time domain to find the periodicity of vibration abnormality. The FFT and order analysis show the increase in the amplitude of sidebands and gearmesh frequency (GMF) with natural frequency visible in the spectrum. The sound analysis with 1/3 octave shows a significant increase in sound pressure level when compared with healthy gear. The experiment is carried out for various RPM level.





Analysis Of Shock Waves Treated Aluminium 2024 Reinforced With Graphite

Goutham B K
Final year M.Tech student, PES college of Engineering, Mandya
GUIDE: Mr. M R Srinivasa, Assistant Professor

ABSTRACT

Composite materials are rapidly replacing conventional engineering materials, because of their benefits over monolithic structures. The Metal Matrix Composite is a composite composed of a metal alloy combined with continuous fibers, whiskers, or ceramic particles. Metal-ceramic composite particles, aluminum-graphite, aluminum-aluminum, and aluminum-silicon carbide particles could have enhanced wear resistance, high-temperature hardness and strength, Al 2024 with 0%, 0.25%, 0.5%, 0.75%, 1% graphite MMC material were fabricated using the stir casting method. For the treatment of shockwaves, the cast composites were machined and prepare the flat square plate specimens. From the tests conducted for the characterization of mechanical properties, composite material specimens have been found to possess enhanced hardness. Also, from the Surface hardness (BHN) test performed it is found that hardness of the composite with 1% graphite as reinforcement more surface hardness compared with 0%, 0.25%, 0.5%, and 0.75% of reinforcement. Also, the surface hardness of composite with 0%, 0.25%, 0.5%, 0.75%, 1% of reinforcement increased with an increase in the number of shockwaves.

An Experimental Study of Vibration Characteristics of Al-Tio_2-Gr Hybrid MMC Processed Through Stir Casting Technique

Shruthi H M
Final year M.Tech student, PES college of Engineering, Mandya
GUIDE: Mr. Doddaswamy V, Assistant Professor

ABSTRACT

Metal Matrix Composites (MMCs) have many beneficial characteristics like light weight, high strength, stiffness and exhibit greater resistance to corrosion, oxidation, wear and having high damping capacity. The effect of TiO_2 and graphite particulates on mechanical strength of the Aluminium based composites processed through stir casting technique was investigated. Titanium Oxide (TiO_2) and graphite (Gr) particles were used as reinforcement phases for the present study. The hybrid MMCs was prepared with varying weight proportions of TiO_2 particles for 4%, 8% and 12% and 3% constant weight of graphite. The average particles size of TiO_2 and graphite are 44 microns and 149 microns respectively. The stir casting process was carried out. The microstructure and mechanical properties are investigated on prepared hybrid MMCs in addition to this an experimental modal analysis approach is used to characterize the vibration behavior of MMC plate. Experimental investigation of vibration characteristics of hybrid MMCs is carried out by impact hammer method using FFT analyzer.The results obtained were indicates that the increase in the natural frequency and damping ratio due to addition of titanium dioxide and constant proportion of graphite with aluminium alloy 6061.

The Impact of High Performance Work Practices on Employee Engagement At Selected It Company At Bangalore

Nisarga G S
Final year MBA student, PES college of Engineering, Mandya
GUIDE: Mrs, Pooja Nagpal, Assistant Professor

ABSTRACT

This project internship helped me in gaining practical knowledge on how the human resource division of an organization operates and coordinates its activities to ensure smooth functioning of the organization at all levels by ensuring right numbers of people are available at the right time to do the right job. It also gave me an opportunity to understand those high performance work practices followed by the organisation. I also got to observe how the HR department strived to engage the employees towards the organisational goals through various Practices termed as HPWPs.

During the course of my internship, I had worked along with the general Human Resource team and assisted them by carrying out various tasks assigned to me on a daily and weekly basis. This report is about the Impact of high performance work practices on the Employee Engagement. Analysing the impact of each practice followed by the HR managers in the organisation and their impact on the engagement of employees with the organisation and its goals is the final theme of this report.

My project internship was focused towards studying and analysing the Impact of high performance work practices on the Employee Engagement. In addition to that, I have also gained insight into the working culture of the organization and observed how the organisation handles its employees with value and empowerment to ensure they are motivated to give their best to the organization.

This paper intends to study the impact of HPWPs on Employee Engagement at AxisCades engineering technologies, Bangalore. Responses were collected from 128 employees out of 500 employees on various statements made on the selected HPWPs and the employee engagement . The responses were later analysed using SPSS through correlation technique to interpret the impact of HPWPs on employee engagement and each practice were found to have a certain degree of positive correlation on employee engagement providing a strong base to conclude that each of these practices have an impact on employee engagement with different degree of correlation. Suggestions were provided to HR managers based on the results obtained.

A Study on Recruitment And Selection Process At MSIL Bangalore

Bhuvana B Gowda
Final year MBA student, PES college of Engineering, Mandya
GUIDE: Dr A S Mahesh, Associate Professor

ABSTRACT

Recruitment and selection are two of the foremost importantfunctions of personnel management. Recruitment precedes selection and helps in selecting a right candidate.

Pricing and Promotional Strategy

Nagaprathap GK
Final year MBA student, PES college of Engineering, Mandya
GUIDE: Dr. A C Kiran Kumar, Associate Professor

ABSTRACT

This topic includes the study on pricing and promotional strategy of S.M. KANNAPPA AUTOMOBILES PVT LTD with special reference to the main branch of Bangalore. The pricing and promotional strategies is a process of persuading a potential customer to buy the product

Alexa Skill Development System

Vikas S
Final year MCA student, PES college of Engineering, Mandya
GUIDE: Dr.Mohan Kumar HP, Professor, HOD

ABSTRACT

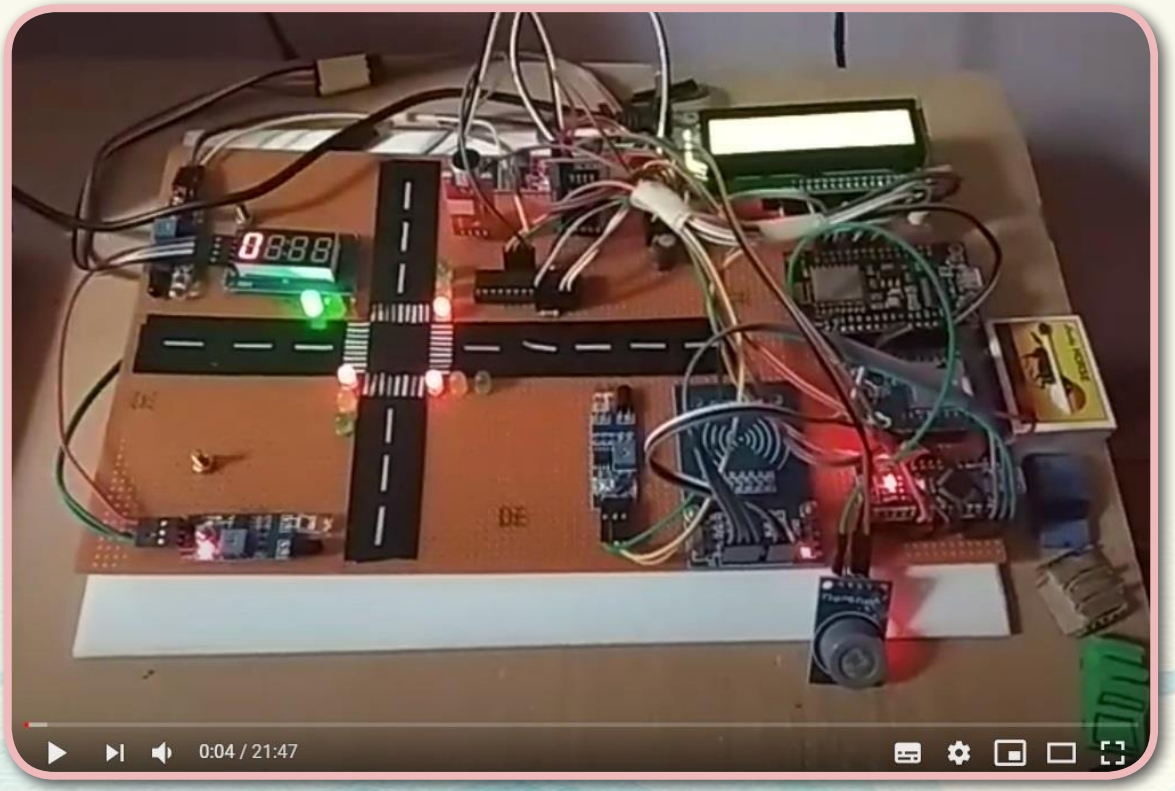
Alexa is a voice assistant from Amazon. It is integrated into smart speakers such as Amazon Echo and Echo Dot. As well as into Echo Show and Echo devices. Those devices can provide different kinds of information by a voice request. Amazon allows developing custom skills for Alexa which makes the technology more attractive. Skills are some sort of applications that can be used by Echo devices. To use those skills a person should say a wake-up word and activate the skill. All the interaction with the skill is happening by voice. So basically you get the voice interface no buttons no screens. Well, Alexa can duplicate the output of some simple information on your phone or other devices such as the Echo Show and Echo Spot. But in general, all the communication is verbal We are using this technology to develop Alexa Skill that interacts with the user. That can do any task he asks the Alexa to do, like reminding him of his works or to-do list, making his work easier to Controlling the Devices. Developing Alexa Skill Using Node.JS or Python Language. With Lambda function and Amazon Web Server.

Traffic Signal Monitoring And Controller System

Indushree V D
Final year MCA student, PES college of Engineering, Mandya
GUIDE: Dr.Veena MN, Professor

ABSTRACT

Presently a day there is an issue in rush hour gridlock. Because of the high populace, there are substantial vehicles on the planet. Subsequently to control the trafficking framework we are utilizing sensors. In this undertaking, we are utilizing the IoT idea for the constant issue. Accordingly, to control traffic IR sensors are utilized in the path and it will compute the thickness of the vehicle and the time will be designated and if the vehicles are not there in the path the time will be a bounce to the following path. On the off chance that the crisis or VIP vehicle is shown up the sign will be liberated for those vehicles. Sound Pollution is controlled during a red sign by restarting the traffic timings. Smoke contamination is determined for the path of the traffic.

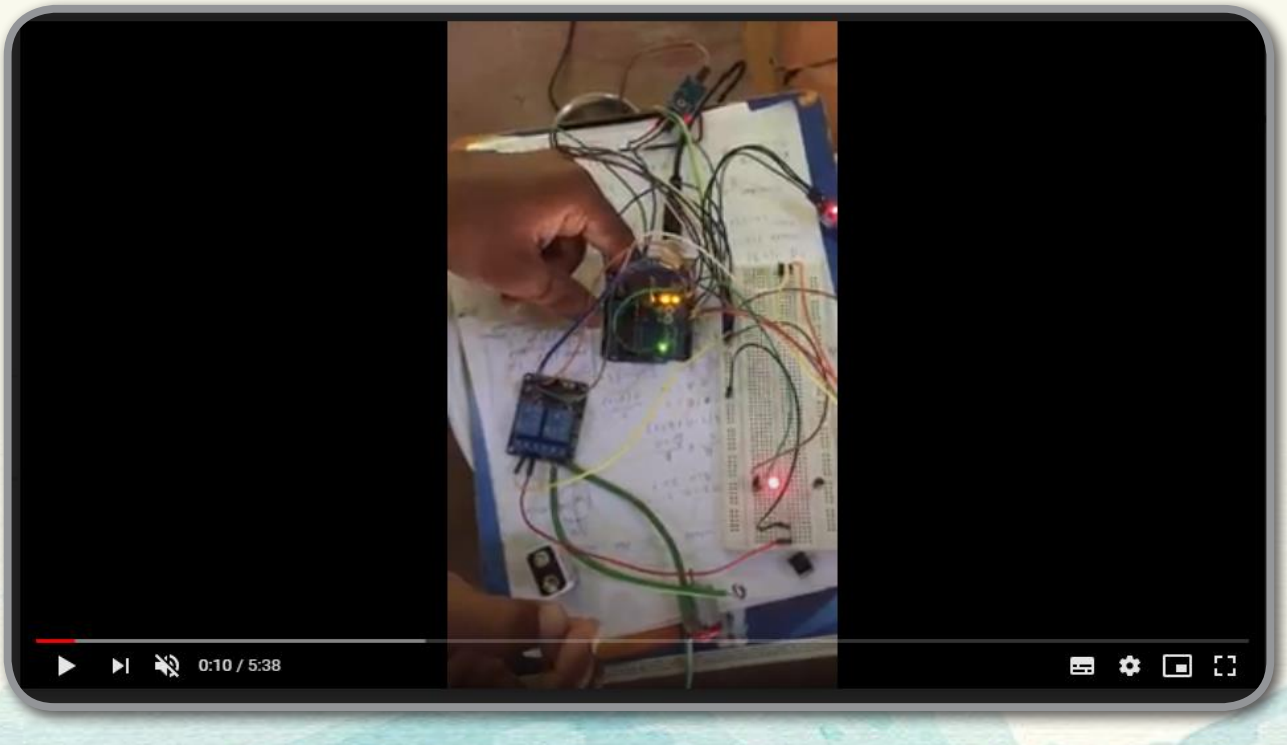


Iot Based Smart Agriculture Monitoring System

Swaraj C M
Final year MCA student, PES college of Engineering, Mandya
GUIDE: Sowmyashree KM, Assistant Professor

ABSTRACT

In olden Days Farmers used to figure the ripeness of soil and influenced suspicions to develop which to kind of yield. They didn't think about the humidity, level of water and especially climate condition which terrible a farmer increasingly The Internet of things (IOT) is remodeling the agribusiness empowering the agriculturists through the extensive range of strategies, for example, accuracy as well as practical farming to deal with challenges in the field. IOT modernization helps in assembly information on circumstances like climate, dampness, temperature and fruitfulness of soil, Crop web based examination empowers discovery of wild plant, level of water, bug location, creature interruption in to the field, trim development, horticulture. IOT utilize farmers to get related with his residence from wherever and at whatever point. To see remotely the conditions as picture and video, remote cameras have been used. IOT development can diminish the cost and update the productivity of standard developing.
Keywords: Soil moisture sensor, Water level sensor, Humidity sensor, Temperature sensor.

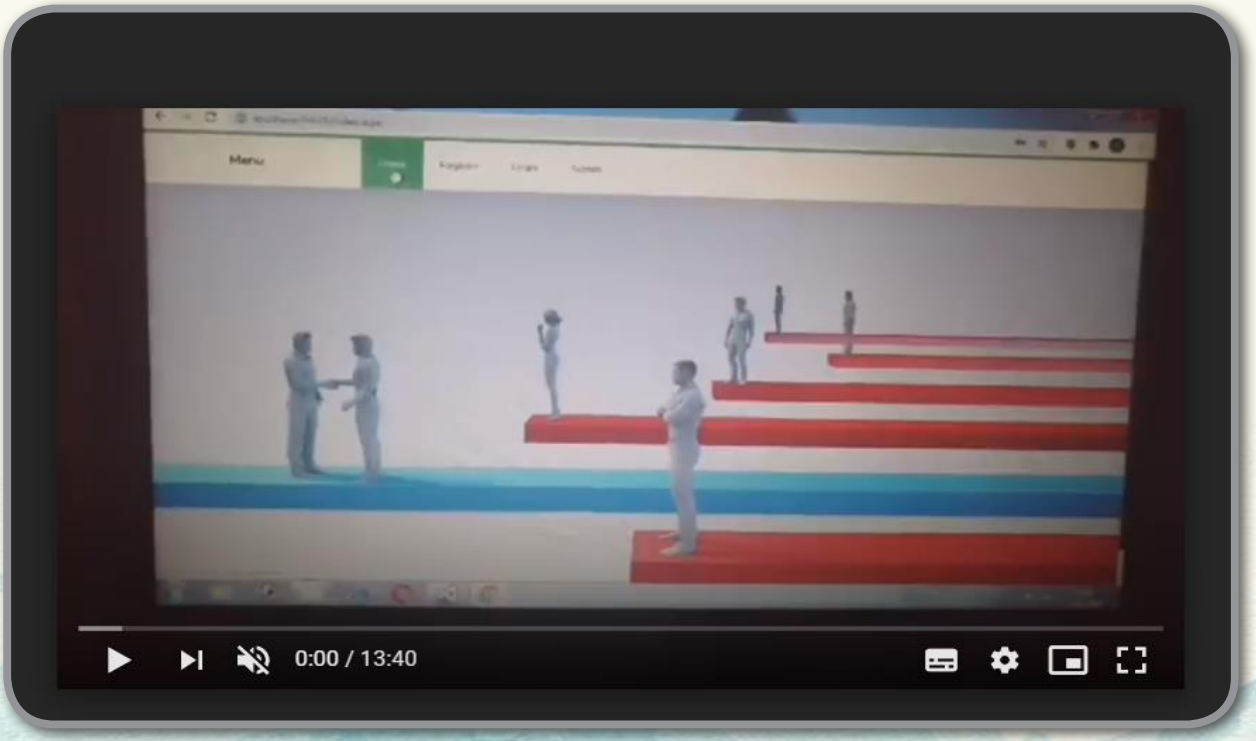


Trade Clearing And Settlement Using Blockchain

Priyanka Rebello
Final year MCA student, PES college of Engineering, Mandya
GUIDE: Shilpa HL, Assistant Professor

ABSTRACT

Tender is a process of inviting bids for a large project by Government or Private sectors. There are four types of tenders they are Open tender, Selective tender, Negotiated tender, Single-stage, and two-stage tender. Open tendering is the main tendering procedures employed by both the government and private. Selective tendering only allow suppliers to submit tenders by invitation. Negotiated tender is extensively used in the engineering and construction industry commencing from tendering till dispute resolutions. Single-stage tendering is used when all the information necessary to calculate a realistic price is available when tendering commences. Two-stage tendering is used to allow the early appointment of the supplier, before the completion of all the information required to enable them to offer a fixed price, in the first stage limited appointment is agreed to allow work to begin and in the second stage, a fixed price is negotiated for the contract. In the present system, the tendering process concerning tender allocation is a tedious task, So it is delayed the process and chances of third-party interfere (broker).

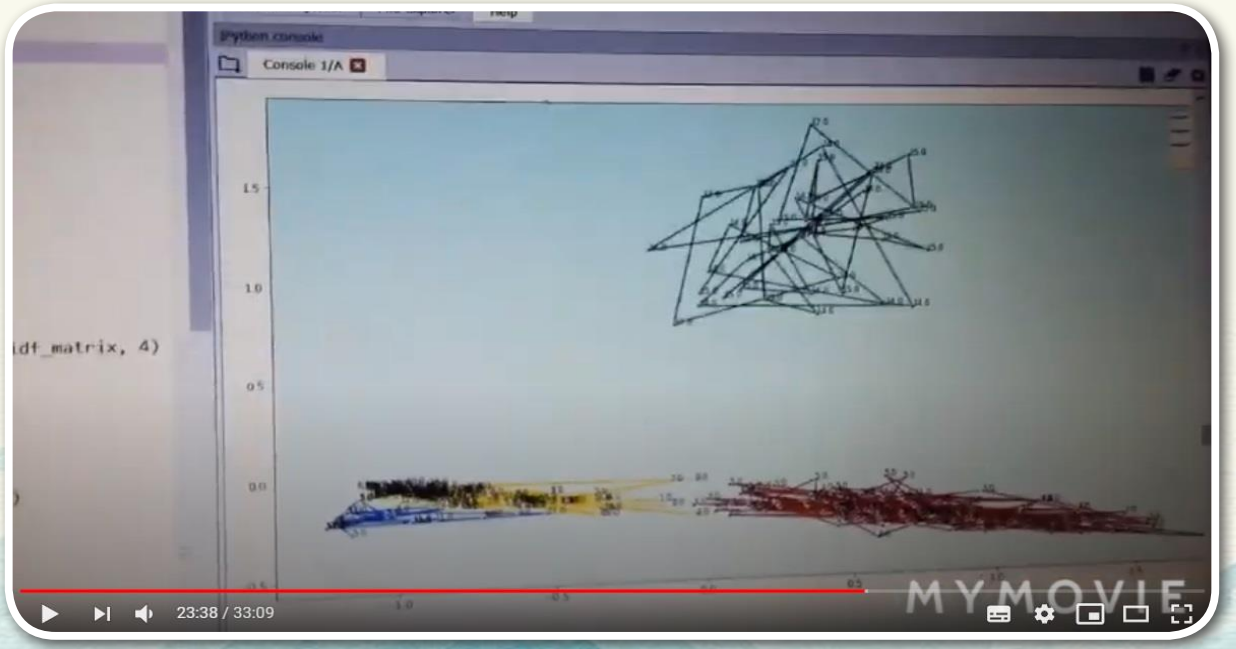


Online Admm-Based Extreme Learning Machine For Spare Supervised Learning

Kavya A
Final year MCA student, PES college of Engineering, Mandya
GUIDE: Dr.Veena MN, Professor

ABSTRACT

The sparse analysis is an effective technique for selecting machine learning functionalities and preventing prediction error in research areas. An online sparse supervised learning of extreme learning machine (ELM) algorithm is proposed because of sparse learning for real-world problems training requirements in neural networks based on the alternative multiplier path method, the -regularization penalty is applied to the failure method to generate a sparse solution to increase generalization efficiency. The decentralized application of ADMM solves this curved combinational failure function. Therefore an enhanced ADMM is used to modularize the calculations and to make the language easier & simpler. The algorithm proposed is capable of learning knowledge one by one, or step by step. The study of optimization for both the specified response stage is given to show the reliability and computational complexity of the proposed method. Experimental results show a wide variety of regression tasks, multi-class classification tasks, and a domain-specific industry task, the suggested approach is capable of achieving a fragmented solution and generalizing performance.

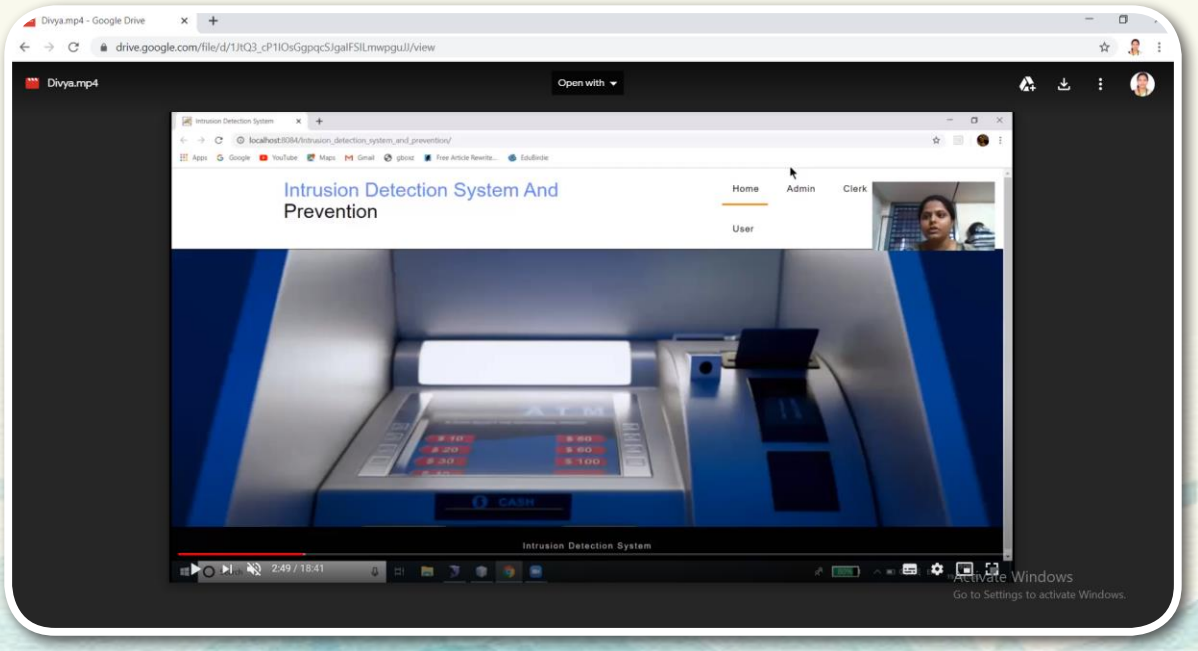


Anomaly Based Intension Detection System Though Feature Selection Analysis And Building Hybrid Model

Divya N
Final year MCA student, PES college of Engineering, Mandya
GUIDE: Sowmyashree KM, Assistant Professor

ABSTRACT

This thesis describes the challenge of improving the intrusion detection and prevention system based on anomalies. With the widespread reliance on technological solutions by corporations, cyber threats have proven to be a key concern of businesses themselves. Therefore, the security steps to be taken want a simple firewall and malware presence to move. A description of the two IDPS intrusion systems has been given in this work. This dissertation's main goal is to provide information on intrusion detection, intrusion detection strategies, types of attacks, cool instruments and techniques, and to write down any kind of Misleading local traffic and use of laptop not detectable any longer with the aid of firewall capabilities. It involves neighborhood attacks on vulnerable infrastructure, data on applications that have been moved, hosting extraordinarily related attacks like increases in privilege, unauthorized logins, and confidential file access.



Innovative Idea in Media

"Publicity enhances the identity, builds credibility and boosts effective competitiveness". That is the power of publicity. For the above reasons and to kindle the spark of innovation among the publics, the college has decided to exhibit the innovative projects in front of the media persons. The plan was implemented in the phases.

1. First, the videos of the selected innovative projects were displayed at press meet held at "press club auditorium" on 6th October 2020
2. Presented the innovative projects of I&P, I&S , E&C, CS engineering in the 1st phase of "Project presentation program " held on 14th October 2020 at the chamber's of the principal.
3. Presented the innovative projects of CS and Civil engineering in the 2nd phase of "Project presentation program " held on 17th October 2020 at the Smart class room of MBA block
4. Presented the innovative projects of Automobile and E&E engineering in the 3rd phase of "Project presentation program "held on 21st October 2020 at the Automobile engineering block.
5. Presented the innovative projects of MCA in the 4th phase of "Project presentation program " held on 24th October 2020 at the Smart class room of MBA block
6. To commemorate the celebrations of "Kannada Rajyothasava" uploaded the "Abstracts in kannada" of selected Innovative projects to the website of the college for the benefit of local people.
7. Presented the innovative projects of Mechanical engineering and MBA in the 5th phase of "Project presentation program " held on 28th November 2020 at the Smart class room of MBA block

Press meet held on 6th October 2020

Bags Best Paper Award

A Technical paper entitled "Paddy Crop Disease Detection using Machine Learning" presented by students of Department of E&C Engineering of P.E.S. College of Engineering, Mandya — B.S. Prajwal Gowda, H.A. Nisarga, M. Rachana and S. Shashank — has bagged the Best Paper Award in the "National Conference on Communication and Data Science" conducted by GSSS Institute of Engineering and Technology, Mysuru in association with ISTE and IJERT on July 15. The award-winning students were felicitated by College Principal Dr. H.V. Ravindra. Head of the E&C Department Dr. K.A. Radhakrishna Rao, Dean (I.I.I) Dr. B.S. Shivakumara, Professor S. Vinay, Professor M. Punith Kumar and Guide B.S. Sahana Raj are also seen.

ವಿದ್ಯುತ್ ಚಾಲಿತ ಕ್ರೀಡಾ ವಾಹನ ಪ್ರಾತ್ಯಕ್ಷಿತೆ

ಹೊಸ ವಿದ್ಯುತ್ ಆವಿಷ್ಕಾರಕ್ಕೆ ಒತ್ತು

ಪಿಇಎಸ್ ಕಾಲೇಜಲ್ಲಿ ತಾಂತ್ರಿಕ ಪ್ರಾಜೆಕ್ಟ್ ಅನಾವರಣ

ನವೀನ ತಾಂತ್ರಿಕ ಯೋಜನೆ ಕುರಿತ ಪ್ರಾತ್ಯಕ್ಷಿ

ವಿಜ್ಞಾನ ಪ್ರಾತ್ಯಕ್ಷಿಕೆ: ಪಿಇಎಸ್ ವಿದ್ಯಾರ್ಥಿಗಳ ಸಾಧನೆಗಳಿವು!

P.E.S. College of Engineering

Mandya- 571 401, Karnataka

(An Autonomous Institution Affiliated to VTU, Belagavi)
Grant-in-Aid Institution (Government of Karnataka)
World Bank Funded College (TEQUIP), Accredited by NBA, NAAC
New Delhi, Approved by AICTE, New Delhi.

ಪಿ.ಇ.ಎಸ್. ತಾಂತ್ರಿಕ ಮಹಾವಿದ್ಯಾಲಯ

ಮಂಡ್ಯ–571401, ಕರ್ನಾಟಕ

(ವಿಟಿಯು, ಬೆಳಗಾವಿ ಅಡಿಯಲ್ಲಿನ ಸ್ವಾಯತ್ತ ಸಂಸ್ಥೆ)

Phone : +91-8232-220043/238042/220120/238330/238683, Fax : 08232 - 222075
e-mail : principal@pesce.ac.in, wed : www.pescemandya.org.www.pesce.ac.in