MAHATMA EDUCATION SOCIETY'S

Pillai HOC College of Engineering & Technology

Pillai HOCL Educational Campus, Rasayani, Khalapur, Raigad - 410207

Alumna
Astral

Alumni Newsletter

2023–2024

MAHATMA EDUCATION SOCIETY'S
महात्मा एज्युकेशन सोसायटीचे
PILLAI HOC COLLEGE OF ARCHITECTURE
पिल्लई एच.ओ.सी. कॉलेज ऑफ आर्किटेक्चर

MAHATMA EDUCATION SOCIETY'S
महात्मा एज्युकेशन सोसायटीचे
PILLAI HOC INSTITUTE OF MANAGEMENT STUDIES & RESEARCH
पिल्लई एच.ओ.सी. इन्स्टिट्यूट ऑफ मॅनेजमेंट स्टडीज अँड रिसर्च

PILLAI HOC COLLEGE OF ARCHITECTURE

PILLAI HOC INSTITUTE OF MANAGEMENT STUDIES & RESEARCH

OUR INSPIRATION

**Dr.K.M. Vasudevan Pillai ,Chairman & CEO, MES
Dr. Daphne Pillai, Secretary, MES**

"We are committed to provide a holistic education based on new generation academics that creates not just powerful global career options for our students, but which empowers them to be come key contributors to the community and the environment in which they live."

VISION AND MISSION

VISION

- To be a premier institution, cultivating diverse learners & researchers into globally competent professionals for the betterment of society.

MISSION

- To promote continuous learning, research in fundamental and emerging areas
- To inculcate a culture of curiosity, professionalism, teamwork, innovation, and entrepreneurship among the learners.
- To enable the sharing of knowledge and expertise with industry, academic and research entities and to address global challenges effectively.

OUR MOTIVATION

Dr. Priam Pillai, COO, MES

Dr. Franav Pillai, DCEO, MES

**Dr. Lata Menon, DYCEO,
Pillai HOCL Educational Campus**

Dr. Jagdish W. Bakal, Principal, PHCET

At Pillai HOC College of Engineering & Technology, our teaching and learning approach aims for a balanced mix of skills, knowledge, and the right attitude. We emphasize understanding core concepts in each course and encourage interdisciplinary thinking through problem-solving, group projects, and hobby clubs. Our campus offers a unique environment that fosters culture, art, sports, and values. Student societies provide platforms for competitive extracurricular activities, enhancing both individual and teamwork skills.

Prof. Rahul Kapse
Chairman Alumni Comittee, PHCET

On behalf of the Alumni Committee, I welcome you. One of our goals is to preserve a mutually beneficial, enduring relationship among alums and with the PHCET.

We are constantly seeking meaningful ways to embrace your needs and unite our efforts in the name of PHCET.

I urge you to become an active alumni and share in the exciting activities and opportunities this organization has to offer. There are a variety of ways you can show appreciation and play a part in PHCET's continued success. This includes attending events, cheering for our teams, staying connected to each other and the PHCET, and of course, offering your time and gifts to help PHCET students. Through Newsletter : get involved with the Alumni Association, read about inspiring alumni accomplishments, find out about upcoming alumni activities, learn about on-campus events, volunteer and much more. Wherever you are, at whatever stage of life you are in, there's something here for you. I encourage you to share and use this Newsletter as one way to engage with the Alumni Association and maintain your personal connection to the Institute.

We are excited about the direction and future of the PHCET Alumni Association and look forward to serving and sharing information with you, throughout the year.

LIST OF HOD AND ALUMNI CO-ORDINATOR

Prof. Amar Jadhav
HOD of Automobile Engineering

Prof. Vivek Meshram
Alumni Co-ordinator of Automobile Engineering

Prof. Raju Narwade
HOD of Civil Engineering

Prof. Manisha Jamgade
Alumni Co-ordinator of Civil Engineering

Prof. Rohini Bhosale
HOD of Computer Engineering

Prof. Snehal Shinde
Alumni Co-ordinator of Computer Engineering

Prof. Pranita Chavan
HOD of Electrical Engineering

Prof. Aamir Shaikh
Alumni Co-ordinator of Electrical Engineering

Dr. Mansi Subhedar
HOD of Electronics and Telecommunication Engineering

Prof. Priya Tambe
Alumni Co-ordinator of Electronics and Telecommunication Engineering

Dr. Divya Chirayil
HOD of Information Technology

Prof. Komal Golimbade
Alumni Co-ordinator of Information Technology

Dr. Gajendra Patil
HOD of Mechanical Engineering

Prof. Aditya Shinde
Alumni Co-ordinator of Mechanical Engineering

DEPARTMENT OF AUTOMOBILE ENGINEERING

ADVANCING ELECTRIC MOBILITY: THE RISE OF SODIUM-IRON BATTERIES IN VEHICLE INNOVATION

In the dynamic landscape of electric vehicles (EVs), the pursuit of efficient and sustainable energy storage solutions remains a pivotal focus. Among the emerging contenders, sodium-iron batteries are gaining momentum as a promising alternative to traditional lithium-ion batteries.

• Sodium-Iron Batteries: Unveiling the Potential
Sodium-iron batteries leverage the abundance of sodium and iron, making them an attractive option for large-scale energy storage. Unlike lithium-ion batteries, which rely on scarce resources, sodium and iron are abundant and cost-effective, contributing to a more sustainable energy ecosystem.

• Industry Adoption and Commercial Viability
As research progresses, major automotive manufacturers are showing interest in sodium-iron battery technology. The potential for scalability and reduced dependence on expensive materials aligns with the industry's quest for sustainable solutions. Pilot projects and partnerships between automakers and battery manufacturers are signaling a shift towards incorporating sodium-iron batteries in the next generation of electric vehicles.

• Environmental Implications
Beyond its technical merits, the use of sodium-iron batteries contributes positively to environmental sustainability. The reduced environmental impact during the extraction and manufacturing processes aligns with global efforts to create cleaner and greener transportation options.

• Future Prospects: Driving the Evolution of Electric Vehicles
The development of sodium-iron batteries underscores the evolving landscape of energy storage for electric vehicles. As technology advances and research breakthroughs continue, these batteries have the potential to revolutionize the automotive industry by offering a more sustainable, cost-effective, and safer alternative to conventional lithium-ion batteries.

In conclusion, the ongoing research and development of sodium-iron batteries mark a significant stride towards the widespread adoption of electric vehicles. The promise of enhanced energy density, safety, and environmental sustainability positions sodium-iron batteries as a compelling solution, paving the way for a cleaner and more efficient future in the realm of electric mobility.

Pravin Patil , Batch 2021

ADBLUE – DIESEL EXHAUST FLUID

Adblue is a Diesel Exhaust Fluid in a vehicles with Selective Catalytic Reduction (SCR) technology to reduce harmful gases being released into the atmosphere. Adblue is a 32.5 % solution of high purity synthetically manufactured urea in demineralized water. It is a safe to use fluid. It is certified according to ISO 22241.

This international standard protects your vehicle from contamination which could cause serious damage. Using a urea solution of incorrect or low quality, that doesn't follow these standard risks costly repairs. The development of Selective Catalytic Reduction technology with the Adblue injection system Significantly reduces emissions, allowing vehicles to comply with Euro 4, 5 & 6 legislation

• Clear and odourless liquid classified as non toxic and safe to handle

• Freezing Point -11 degree Celsius

• Crystallisation upon drying can cause corrosion and spillage should be cleaned using water

• Corrosive to iron, copper, bronze, some aluminum alloys

• The urea in its unit content should be suitable for the industry, ie the automotive

Pratish Goving, Batch 2023

HYDROGEN FUEL CELL TECHNOLOGY

ydrogen fuel cell technology has emerged as a transformative force in the pursuit of sustainable and clean energy solutions. At its core, a hydrogen fuel cell is an electrochemical device that converts the chemical energy of hydrogen and oxygen directly into electricity, with the only byproduct being water vapor. This groundbreaking technology offers a myriad of advantages and holds immense potential across various sectors.

Clean Energy Production:

One of the standout features of hydrogen fuel cells is their ability to produce electricity without combustion, eliminating harmful emissions and significantly reducing the carbon footprint.

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Clean Energy Production:

One of the standout features of hydrogen fuel cells is their ability to produce electricity without combustion, eliminating harmful emissions and significantly reducing the carbon footprint. This characteristic positions hydrogen fuel cells as a key player in the global effort to combat climate change and transition towards cleaner energy sources.

High Energy Efficiency:

Hydrogen fuel cells boast impressive energy conversion efficiency compared to traditional combustion engines. The direct conversion of chemical energy into electricity allows for a more efficient use of the energy stored in hydrogen, making fuel cells an attractive option for applications demanding high efficiency, such as electric vehicles and stationary power generation.

Versatility and Scalability:

Hydrogen, the primary fuel for these cells, can be sourced from a variety of feedstocks, including renewable sources, natural gas, and biomass. This versatility enables scalability and adaptability, making hydrogen fuel cells suitable for a broad spectrum of applications, ranging from transportation to industrial processes and grid power.

Challenges and Opportunities:

While the potential of hydrogen fuel cell technology is immense, it is not without its challenges.

The production of hydrogen, particularly the shift towards green hydrogen produced using renewable energy, poses a logistical challenge. Additionally, the cost of manufacturing and deploying fuel cells, along with the need for an extensive refueling infrastructure, remain hurdles to widespread adoption.

Conclusion:

Hydrogen fuel cell technology represents a beacon of hope in the quest for a sustainable and cleaner energy future. As research and development efforts intensify, addressing challenges related to hydrogen production, cost, and infrastructure will be crucial for unlocking the full potential of fuel cells. The prospect of harnessing hydrogen as a clean energy carrier holds promise not only for reducing environmental impact but also for reshaping the global energy landscape. In the race towards a greener tomorrow, hydrogen fuel cell technology stands as a powerful contender, ready to power the world with efficiency, versatility, and environmental responsibility.

Vedang Budukh, Batch 2020

HYDROGEN FUEL CELL CARS: PIONEERING SUSTAINABLE MOBILITY

Introduction:

In the pursuit of a sustainable and eco-friendly transportation future, hydrogen fuel cell cars have emerged as a compelling solution. Harnessing the power of hydrogen, these vehicles offer a clean alternative to traditional internal combustion engines, addressing environmental concerns and paving the way for a 1 Working Principle:

Hydrogen fuel cell cars operate based on a simple yet revolutionary principle. The heart of the system is the fuel cell, which combines hydrogen and oxygen to produce electricity through an electrochemical reaction. This electricity then powers an electric motor, propelling the vehicle forward. The only byproduct of this process is water vapor, making hydrogen fuel cells an environmentally friendly and zero-emission technology.

2. Zero Emissions and Air Quality:

One of the primary advantages of hydrogen fuel cell cars is their contribution to clean air. Unlike conventional vehicles that emit harmful pollutants, fuel cell cars produce no tailpipe emissions other than water vapor. This makes them a key player in reducing air pollution and improving overall air quality, especially in urban areas.

3. Fast Refueling and Extended Range:

Hydrogen fuel cell cars offer a refueling experience similar to traditional gasoline vehicles, taking only a few minutes to fill up the tank. Additionally, these vehicles boast an impressive driving range, often comparable to that of traditional internal combustion engine cars.

4. Infrastructure Development:

The widespread adoption of hydrogen fuel cell cars depends on the development of a robust infrastructure for hydrogen refueling stations. While progress has been made in various regions globally, further investment and collaboration are needed to ensure a comprehensive network that supports the growth of hydrogen-powered vehicles.

5. Challenges and Innovations:

Despite their promise, hydrogen fuel cell cars face challenges, including the cost of production, the energy-intensive process of hydrogen production, and limited infrastructure. Ongoing research and technological advancements are focused on addressing these challenges, with a particular emphasis on reducing costs, improving efficiency, and exploring sustainable methods of hydrogen production.

6. Global Initiatives and Future Outlook:

Governments and industries worldwide are recognizing the potential of hydrogen fuel cell technology and are investing in initiatives to promote its adoption. As research and development efforts continue, the future looks promising for hydrogen fuel cell cars, with the potential to play a significant role in achieving a sustainable and zero-emission transportation ecosystem

Suryash Sawant, Batch 2023

DEPARTMENT OF CIVIL ENGINEERING

THE CRUCIAL ROLE OF INTERNSHIPS IN CIVIL ENGINEERING EDUCATION.

Introduction: Internships play a pivotal role in shaping the future of civil engineering students by providing them with practical experience and a deeper understanding of their field. Real world Application of Knowledge: Internships bridge the gap between theoretical knowledge gained in classrooms and its practical application in the real world. Working on actual projects allows students to see how their academic learning translates into tangible solutions for engineering challenges. Hands-on Experience: Civil engineering is a hands-on profession, and internships offer students the chance to apply their skills in a real-world setting. This hands-on experience helps them develop technical proficiency, problem-solving abilities, and a better understanding of construction processes. Exposure to Diverse Projects: Internships expose students to a variety of civil engineering projects, ranging from infrastructure development to environmental engineering. This exposure broadens their knowledge base, helping them discover specific areas of interest within the field Networking Opportunities: Internships provide students with the chance to network with industry professionals, fellow interns, and potential employers. Building a professional network during internships can open doors to future job opportunities and collaborations. Soft Skills Development: Beyond technical skills, internships contribute significantly to the development of soft skills such as communication, teamwork, time management, and adaptability.

These skills are crucial for success in any professional setting. Industry Insight: Internships offer students a firsthand look into the day-to-day operations of the civil engineering industry. Understanding the industry dynamics, regulations, and project management processes is vital for preparing students for their future careers. Resume Enhancement: Having internship experience on a resume significantly boosts a student's marketability. Employers value practical experience, and internships demonstrate a candidate's commitment to their chosen field and a proactive approach to professional development. Confidence Building: Working on real projects under the guidance of experienced professionals builds students' confidence in their abilities. This confidence is invaluable as they transition from academic settings to the demands of the professional engineering world. In conclusion, internships are a cornerstone of civil engineering education, providing students with a holistic learning experience. The practical exposure, skill development, and industry insights gained during internships are instrumental in preparing aspiring civil engineers for successful and fulfillin

Pritam Rajaram Patil, Batch 2023

EXPERIENCE SHARED BY AMEYA A.RANE

Ameya A. Rane, presently he is the Structural Engineer at STERLING Engineering Consultancy Services Pvt. Ltd. Completed his Degree in Bachelor of Civil Engineering (Mumbai University) in 2015.

After that he joined B.G. Shirke Construction & Technology PVT LTD as Junior Engineer (Civil), continued his duties for one & half year. Further he also worked with Numec group in Andheri as Assistant Engineer (Civil) for two year. And also, He completed MTech in Structural Engineering from Sardar Patel College of Engineering (Govt. Aided Autonomous) Mumbai in 2020.

About industrial experience, he contributed in this field from last 9 years in those 5 years in construction field & 4 years in design field.

Projects:

1) Century Mill Redevelopment Project at Prabhadevi, Mumbai.
(S+24) – 5 Towers – Precast Technology.

2) WTC Residential, Chennai. – (3B+S+25) Storey 2 Towers - Completed

3) Salette 27, Byculla, Mumbai. – (2B+S+10P+60) Storey Twin Towers Completed.

4) Roof Top Restaurant, NBCC (India), Delhi.

5) Montana-Blissberg Tower Mulund, Seth Developers

6) Dr Babasaheb Ambedkar Memorial Statue – Ongoing

7) Tejukaya Pride- 2B+S+60- Twin Towers, Lalbaug, Mumbai. – Ongoing

8) Marwah Tower, Sakinaka, Mumbai. – Commercial Project. – Ongoing

9) The Mount Project at Malabar Hills – (6B+S+30) Storey Luxurious Private Residency, Mumbai. - Ongoing

He is member of various institutions of India as follows:

1) Life Member of Indian Society of Structural Engineers.

2) Associate Member of Indian Association of Structural Engineers.

3) Associate Member of Institution of Engineers (India).

4) Registered Technical Person at Town Planning & Valuation Department, Govt. of Maharashtra.

Ameya A. Rane, Batch 2015

MUMBAI METRO LINE-3 PROJECT

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Exposure to Diverse Projects: Internships expose students to a variety of civil engineering projects, ranging from infrastructure development to environmental engineering. This exposure broadens their knowledge base, helping them discover specific areas of interest within the field. Networking Opportunities:

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Suhas Awari, Batch 2014

EXPERIENCE SHARED BY DEEPAK CHAUHAN

A Jr Engineer with 3+ year Experience in Elevated Metro project Line-04 & Line-06 (Mumbai). Experience in Execution of Construction site work.. now in Tata Consulting Engineers Limited with Site Engineer-K5 as a Client at Mumbai - Ahmedabad High Speed Rail Corridor.

ROLE & RESPONSIBILITIES:
1) Structures BBS & reinforcement checking.
2) Planning & Coordinating on site Activity.
4) Supervise of L&T(Contractors) staff.
5)Providing technical advice and solving problems on the Site.
6) Ensuring that Methodology for Construction being used by Contractors is in accordance with approved system and Procedures.
7)Ensure that the work is executed by Contractor staff Accordance with Good for Construction Drawing.
8) Checking of structure which is executed by Contractor such as Pile, pile cap ,pier cap , stitch ,Pier cap pedestal , stubs column etc.
9) Checking technical designs and drawings to ensure that they are followed correctly.

Deepak Chauhan, Batch 2020

EXPERIENCE SHARED BY VIVEK KUMAR

Hello folks,

I am Vivek Kumar, I have not only completed my B.E. (2016 pass out) but also my Masters in Construction Engineering and Management from Pillai HOC college of Engineering and Technology. I have also worked as a Teaching assistant here so this college holds a very special place in my heart. It gives me immense pleasure to share my experience of being the part of the team to complete the first supertall skyscraper in India "The Minerva tower". The name Minerva is inspired by the Greek Goddess representing Art, which is are flection of Minerva's ultimate artistic design, engineering and construction quality. It is a301.3m, 91-floor super tall skyscraper in Mumbai, Maharashtra, India. As of 2024, it is the tallest completed building in India. It has two towers of 91 floors, each of which encompass parking floors up to level 12, two triple-heighted levels with World Class Amenities from floors 14th to 19th, 5-open-to-sky Podium Landscape Gardens on the 20th floor with 2 Banquet Halls through floors 20 to 24 and a service level on the 25th floor, residential floors from 26th to 91st, and two penthouses from floors 89 to 91.

It was proposed in 2010, and construction was started in 2011. As of now OC is already received till 51st floor and final finishing work is going on in the floors above. The structural work was completed in 2023.

Minerva is a unique & inspiring piece of Architecture arranged on an impossibly narrow and linear site that overlooks the majestic Mumbai Race Course and Arabian Sea beyond.

Advanced form-work technology, high-tech equipment and fully mechanized systems were utilise to ensure high-quality construction standards are being met, as well as to enable the timely completion of the project. It is a matter of pride for me at L&T to be part of construction for one of India's tallest buildings. It was a massive challenge to build around a 1000ft tall structure near Mumbai's coastal region. With the advanced technique and quality used to develop this landmark project, we have made the impossible possible.

**Vivek Kumar, Batch 2016**

DEPARTMENT OF COMPUTER ENGINEERING

ARTIFICIAL INTELIGENCE IN AUTOMATION

rtificial intelligence (AI) is changing the face of automation. AI enables machines to learn from their environment and make decisions based on data analysis. This has led to the automation of tasks that were previously impossible or difficult to automate. The potential of AI in automation is enormous, and it is transforming the way businesses operate.

One area where AI has a significant impact is manufacturing. Robots and other machines equipped with AI technology are being used to automate manufacturing processes. These machines can analyze data and make decisions based on the data they collect.

AI is also being used to automate decision-making processes in businesses. Machine learning algorithms are being used to analyze data and make predictions. This allows businesses to make decisions faster and with greater accuracy. For example, AI can be used to analyze customer data to identify patterns and make predictions about customer behavior. This can help businesses to tailor their marketing strategies to meet the needs of their customers.

Another area where AI is having an impact is customer service. Chatbots are being used to automate customer service tasks. These chatbots use natural language processing (NLP) to understand customer queries and provide appropriate responses.
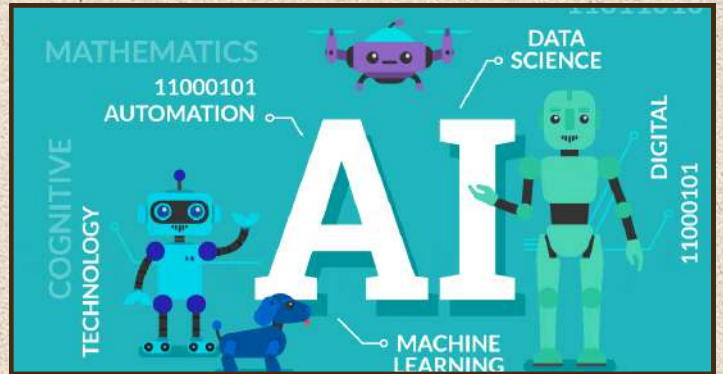
I offers cost savings for businesses by reducing reliance on human customer service representatives. Financial processes like fraud detection and risk management are also automated using AI.

Developing AI ethically is crucial due to its potential societal impacts. Another challenge is the cost of implementing AI, yet the long-term benefits, including heightened productivity and profitability, often justify the investment. In summary, AI transforms automation, enabling once challenging tasks to be automated for greater efficiency. Addressing ethical concerns and managing costs remain important as AI advances automation. The future impact of AI on automation is eagerly anticipated.

Shreejith Pillai ,Batch 2019

LATEST EMERGING TECHNOLOGY

AI TriSM: Ethical AI Management
Artificial Intelligence (AI) is revolutionizing industries, but ethical concerns, risks, and security challenges accompany its rise. This article focuses on AI's trust, risk, and security management, highlighting the need for responsible AI deployment.

Trust in AI:

Trust is pivotal for AI adoption. It encompasses stakeholders' confidence in AI's reliability, accuracy, and fairness. Organizations foster trust by ensuring transparent, explainable, and accountable AI development. Transparent AI reveals decision-making processes, while explainable AI provides understandable explanations. Accountability involves roles for developers, users, and regulators.

Risk Management:

AI introduces risks like bias, discrimination, privacy breaches, and safety concerns. Biased algorithms yield discriminatory outcomes, emphasizing the necessity for careful design and testing. Privacy and safety breaches call for robust measures to safeguard data and prevent harm. In conclusion, as AI becomes integral, ethical considerations, risk management, and security become paramount for responsible AI integration.

These should include ethical guidelines, risk management protocols, and security measures. Organizations must also comply with relevant laws, regulations, and industry standards related to AI, data privacy, and cybersecurity. This may involve conducting regular audits, risk assessments, and compliance reviews to ensure that AI systems are aligned with organizational policies and regulatory requirements.

In conclusion, trust, risk, and security management are critical aspects of responsible AI implementation. Organizations must prioritize ethical and secure AI practices to ensure that AI technologies are reliable, transparent, and accountable. By addressing ethical concerns, managing risks, and implementing robust security measures, organizations can foster trust in AI and maximize its potential for positive impact while minimizing potential risks.

Hussain Manasawala, Batch 2019

GOOGLE BARD: BOON OR BANE FOR CONTENT CREATORS

Google has recently introduced a new artificial intelligence model called "Bard" that is capable of writing its own poetry and songs. Bard is a language model built on top of the GPT-3 architecture and has been trained on a vast amount of text from various sources, including literature, music, and other creative works. The model uses this training data to generate its own original pieces of poetry and music. The name "Bard" is a reference to ancient poets who would recite verses and songs at royal courts and in public places.

Google Bard represents a significant advancement in the field of natural language processing (NLP) and creative AI. Language models like GPT-3 and Bard have the potential to revolutionize the way we interact with machines and the way we create and consume content. What makes Bard stand out from other language models is its ability to generate poetry and music that is not only grammatically correct but also emotionally expressive and artistically sophisticated.

The model is capable of understanding the nuances of language and the emotional tones conveyed by different words and phrases. To demonstrate the capabilities of Bard, Google has released several samples of poetry and songs that were generated by the model. The samples include a poem about a sunset, a love song, and a rap song. The quality of the output is impressive and shows the potential of AI-generated creative works.

Despite these concerns, it is clear that the development of AI-generated creative works like Bard represents an exciting step forward in the field of artificial intelligence and NLP. As these technologies continue to evolve, it will be important for researchers, policymakers, and society as a whole to consider the ethical implications of their use and ensure that they are used for the betterment of humanity.

In conclusion, Although Google Bard raises important questions about the future of ownership and human creativity in the creative industry, it is an exciting development in the field of AI and creativity as it shows the potential for machines to generate original and emotionally expressive works of art. Content creators stand at a crossroads, where they can harness AI assistance to amplify productivity or tread cautiously to preserve the human touch that resonates with audiences.

Mayuri Mate, Batch 2020

DETECTION OF PHISHING WEBSITE

In today's digital age, online security is of paramount importance. With the increasing reliance on the internet for various activities, such as online banking, shopping, and communication, cybercriminals are constantly devising new ways to exploit unsuspecting users. One common method used by hackers is phishing, where fraudulent websites are created to deceive users into revealing sensitive information. Therefore, effective phishing website detection techniques are essential to safeguarding your online security.

Phishing websites are designed to mimic legitimate websites, such as banking or social media sites, with the goal of tricking users into providing their personal information, such as usernames, passwords, credit card numbers, or other sensitive data. These fraudulent websites are often created with the intent to steal sensitive information and commit identity theft or financial fraud. Phishing attacks can occur through various means, including email, social media, instant messaging, or even text messages, and the consequences can be devastating for victims, resulting in financial loss, reputational damage, and emotional distress.

There are several effective techniques that can be used to detect phishing websites, including:

- URL Analysis: Scrutinizing website URLs helps detect phishing. Phishing sites often mimic legitimate ones with slight alterations or typos.
- Website Content Analysis: Examining content reveals phishing signs like poor grammar, misspelled words, or inconsistent design.

Personalized Learning: Digital tools can be used to provide personalized learning experiences for students. Grammar learning software can analyze student's writing and identify specific grammar areas they need to work on. This information can then be used to create personalized grammar exercises that target those areas. As a digital grammar teacher, you can tailor your grammar instruction to meet each student's needs and provide individualized feedback. Gamification: One of the biggest challenges in teaching grammar is making it fun and engaging for students. Digital tools such as grammar games and quizzes can make learning grammar enjoyable for students. As a digital grammar teacher, you can use these tools to create interactive and engaging grammar lessons.

- SSL Certificates: Legitimate sites have SSL certificates, encrypting data. Check for a padlock icon or "https://" in the URL.
- Anti-Phishing Tools: Browsers and security software offer tools that identify and block phishing sites. They use known databases or machine learning to spot suspicious patterns.

In conclusion, safeguarding against phishing is vital. Utilize URL and content analysis, verify SSL certificates, rely on anti-phishing tools, and educate yourself to enhance online security. Staying cautious protects personal information in the digital realm.

Rohan Lokhande, Batch 2020

- Instant Feedback: Utilize grammar checkers to swiftly spot errors, enabling teachers to focus on substantial feedback for student writing. This approach aids students' writing improvement.
- Collaborative Learning: Leverage online platforms for group activities. Encourage teamwork in grammar projects like blogs or podcasts, fostering peer learning and collaborative skills.

DIGITAL GRAMMAR TEACHER WEBSITE

The Digital Grammar Teacher In today's digital age, technology has become an essential part of education. As teachers, it's our responsibility to embrace these advancements and incorporate them into our teaching practices. One area where technology has had a significant impact is in teaching grammar. With the help of digital tools, teachers can create more engaging, effective, and personalized learning experiences for their students. This article will explore how teachers can use digital tools to become a digital grammar teacher.

In conclusion, adopting digital tools elevates grammar teaching. Personalized learning, gamification, writing feedback, collaborative projects, and multimedia integration enhance engagement and effectiveness, catering to individual student needs. As we bid adieu to traditional pedagogical methods, the Digital Grammar Teacher website propels us into an era where dynamic digital resources harmonize with the art of language mastery. This website not only empowers users to grasp the intricacies of grammar but also symbolizes the limitless possibilities that technology brings to education.

Rajashri Kunte, Batch 2013

VIRTUAL AND AUGMENTED REALITY

Virtual and augmented reality are two of the most exciting technologies to emerge in recent years. Both of these technologies have the ability to transform the way we experience the world, and have the potential to revolutionize many industries, from entertainment and gaming to education and healthcare. In this article, we will explore the differences between virtual and augmented reality, and examine some of the ways in which they are being used today.

Virtual Reality:
Virtual reality (VR) is a technology that allows users to enter a completely immersive digital environment, which can be either a completely fabricated world or a replication of a real-world environment. To enter the virtual world, users wear a VR headset, which contains a screen that is split into two images, one for each eye. These images are slightly offset from each other, which creates a 3D effect when they are viewed together.

Augmented Reality:
Augmented reality (AR) is a technology that overlays digital information onto the real world. Unlike virtual reality,

AR does not require users to enter a completely separate digital environment. Instead, AR technology can be used to enhance the user's perception of the real world by adding digital objects or information to it.

Applications of Virtual and Augmented Reality:

Entertainment and Gaming: Virtual reality is being used to create immersive gaming experiences, such as first-person shooters and puzzle games. Augmented reality is being used to enhance real-world gaming experiences, such as scavenger hunts and treasure hunts.

Education: Virtual and augmented reality are being used to create immersive educational experiences, such as virtual tours of historical sites and museums. They are also being used to provide simulations of medical procedures and to enhance classroom learning.

Healthcare: Virtual and augmented reality are being used to provide

In conclusion, virtual and augmented reality are powerful technologies that have the potential to transform many industries and enhance our daily lives. Virtual reality can create immersive experiences, provide safe and cost-effective training environments, and enable product development, while augmented reality can enhance real-world experiences, improve learning, and facilitate remote collaboration.

Pallavi Subhedar, Batch 2013

GRAPHICAL PASSWORD

During early days text password was the well known and only proposed computer authentication scheme to authenticate the user. Initially text passwords were used for authentication system. Text password is nothing but simply collection of characters or string. As how user has to always
create their own passwords for different systems, which would be remember able but hard to guess attackers. But text passwords are easy to hack with some hacking techniques like bruteforce and fishing attacks. As well as it is again difficult to remember more than one text password
for number of different systems to the user.

The methodology used to develop this proposed project is Waterfall model. Waterfall model is a sequential software development model in which the development flows or steps are steadily downwards like a waterfall through several phases. Every step of development proceeds in strict order, without any overlapping in Waterfall model's steps include requirement analysis, system design, implementation, testing, deployment, and maintenance The advantages of waterfall model is easy to understand and use, easy to be manage due to the rigidity of the model, works prefect for smaller projects where the needs are very well understood.

This chapter will discuss about the overall summary of this project, expected results, and suggestion to improve the project to be better in future. Authentication system using Graphical One Time Password has met its aims by providing high security level to the user from threat. This project consists of four sections. First is about planning which include feasibility study and also review of previous research or projects.

Secondly, the design and proposed solution methodology which include waterfall model, system requirement, process model, data model and proposed approach. This phase is important because the data will be used for the next step. Next session is implementation, testing, and results.

Srushti Sawant, Batch 2018

3D PRINTING

3D printing, also known as additive manufacturing, is a revolutionary process that brings digital designs to life by building three-dimensional objects layer by layer. Unlike traditional manufacturing methods that involve cutting and shaping materials, 3D printing starts with a digital model, often created using computer-aided design (CAD) software. This digital blueprint serves as the guiding force for 3D printers, which meticulously slice the design into ultra-thin horizontal layers, each just a fraction of a millimeter thick.

Once the design is sliced, the 3D printer gets to work. It reads the digital instructions and deposits material onto a build platform, often using plastic filament, resin, or metal powder. The printer carefully builds the object layer upon layer, with each new layer bonding to the previous one, creating a precise and complex final product.

After the printing is complete, some objects may require post-processing to achieve their desired appearance and functionality. This can involve steps like cleaning, sanding, or painting.
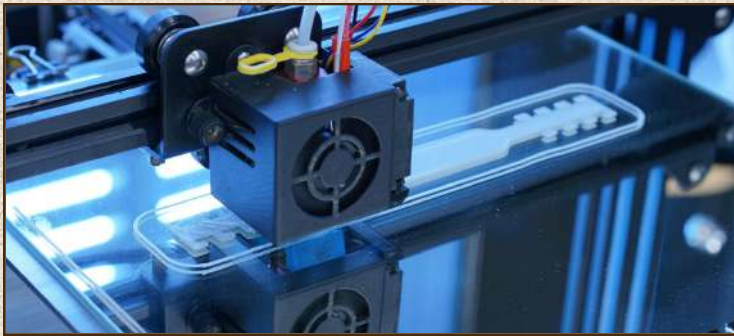
However, 3D printing isn't without its challenges. Material limitations, quality control, and intellectual property concerns are some of the hurdles the industry faces. Nonetheless, researchers are pushing the boundaries of 3D printing. They are developing advanced materials, integrating artificial intelligence and automation, and focusing on sustainability by using recycled materials and reducing energy consumption.

One of the most exciting frontiers in 3D printing is bioprinting, where living tissues and organs are created layer by layer, holding the potential to transform healthcare and save countless lives. Even in space exploration, 3D printing is gaining traction as a solution for on-demand manufacturing during missions, reducing the need to transport extensive supplies from Earth.

In conclusion, 3D printing is more than just a technological advancement; it's a paradigm shift in manufacturing and creativity. It's a tool that empowers us to turn digital dreams into tangible realities, and as it continues to evolve, its impact on various industries and our daily lives will only become more profound.

Uqba Patel , Batch 2015

CYBERSECURITY IN THE DIGITAL AGE

In an era dominated by technology and interconnected systems, the importance of cybersecurity cannot be overstated. The rapid digitization of data, coupled with the rise of sophisticated cyber threats, has elevated the need for robust cybersecurity measures to safeguard sensitive information, critical infrastructure, and personal privacy.

This article explores the evolving landscape of cybersecurity, the challenges it presents, and the strategies employed to ensure a secure digital future.

This article explores the evolving landscape of cybersecurity, the challenges it presents, and the strategies employed to ensure a secure digital future.

3. Data Privacy and Regulatory Compliance:

The digital age has led to an explosion of data, and ensuring its privacy is paramount. Regulations such as the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA) place stringent requirements on organizations to protect user data. Achieving compliance while maintaining seamless user experiences requires a delicate balance.

4. Zero Trust Architecture:

The traditional approach of perimeter-based security is no longer sufficient in today's decentralized and cloud-centric environments. Zero Trust Architecture advocates for a model where no one, whether inside or outside the organization, is inherently trusted. Identity verification, continuous monitoring, and strict access controls are the cornerstones of this paradigm.

Sagar Kamble , Batch 2020

SANSKRUTI GHARAT NATIONAL LEVEL ICESTOCK SPORTS CHAMPIONSHIP

Sanskruti Ghara shines at Nationals, bringing home 2 silvers and 1 bronze in a display of skill and determination! An inspiration

to our community, Sanskruti proves hard work and passion pave the way to success.

Sanskruti Gharat , Batch 2023

DEPARTMENT OF ELECTRICAL ENGINEERING

EXPERIENCE SHARED BY VIRAJ G. MHATRE

As an alumni of Pillai HOC College of Engineering , I reflect on those transformative years with immense gratitude. College provided not only academic knowledge but also invaluable life experiences. The vibrant campus culture, diverse community, and rigorous coursework shaped my perspectives and fostered personal and professional growth. Engaging discussions, collaborative projects, and mentorship from inspiring faculty members enriched my learning journey. Beyond the classrooms, extracurricular activities and student organizations instilled leadership skills and lasting friendships. The bond serving as a foundation for my career and lifelong connections. College, for me, was a crucible of self-discovery and preparation for the challenges that lay ahead. I have gained expertise in drone assembling, modelling and flying during one year apprenticeship. I am now working at JNPT in electrical field where I am using knowledge which I learned during my studies at PHCET.

Viraj G. Mhatre, Batch 2022

EXPERIENCE SHARED BY SRITIKA HALDAR

Hello everyone, My name is Sritika Haldar from the batch 20221, I'm from the electrical department. I'm extremely thankful to this college for giving me the opportunity to participate in various extracurricular activities, festivals and various departmental activities. With the help of this college and my dedicated department I'm currently placed in Torrent Power. The library at PHCET has amazing resources and it was my favorite spot in this college. I thank everyone for the love and exposure they have given me at PHCET Rasayani. In Torrent power , I am doing excellence in my work where I am getting rewarded for which I am thankful to my

Electrical Engineering department and college PHCET.

Sritika Haldar, Batch 2021

EXPERIENCE SHARED BY KAMAL JOSHI

Hello everyone, I am Kamal Joshi, Electrical branch alumni. My department always supported me in all the activities I did. I was a part of NSS, Team Starkers' motorsports as well as've secured a great position in sports like wrestling and different powerlifting games. This really helped me in my professional career and it also helped me boost my confidence. I won silver medal at Mumbai University wrestling championship. Currently I am working in Kent Engineering Pvt. Ltd. company and involved in sports which boosts my career. Recently I won wrestling championship which is huge recognition while working and I am happy to say it is all because of support I got from my college.

Kamal Joshi, Batch 2021

## EXPERIENCE SHARED BY SHUBHAM K. PATIL

Pillai HOC College of Engineering and Technology was a platform for me to boost my technical, practical as well as social knowledge. Being an Electrical Engineer I gain technical knowledge from well-equipped laboratories. College library is one of the biggest sources of my theoretical knowledge. Organizing the various technical events and extracurricular activities are the path to travel in the direction of improving my personality. I have completed professional course of automation at Parecon automation & systems private limited. Now I am working as technical consultant in Rexel India Pvt. Ltd. company of automation where I am applying my basics to achieve tasks. I am thankful to my college for the guidance and knowledge due to which I am at reputed post.

Shubham K. Patil, Batch 2020

DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING
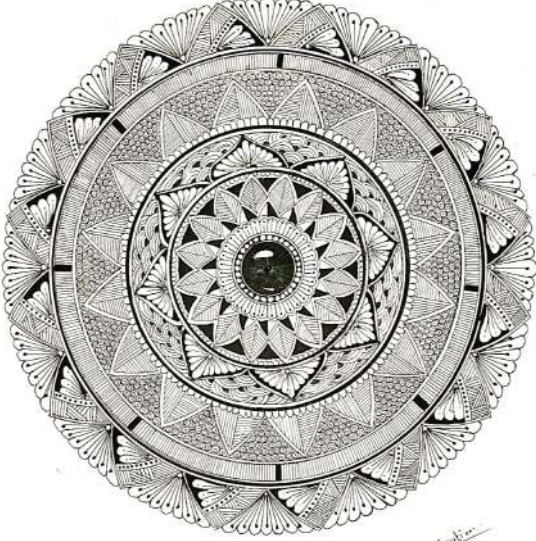
Sanskruti Shelke
EXTC-Batch2022

Sanskruti Shelke
EXTC-Batch2022

हातावर मायेने २-३
रुपये देऊन खाऊ खा
असं म्हणणारी आजी
आज खूप आठवते...

सकाळ ची सुरुवात तिने
भाजलेल्या मशेरीच्या
वासाने व्हायची...तीच
माझी आजी आज खूप
आठवते...

अनेकदा आई बाबांच्या
फटक्यां पासून वाचवून
मायेने समजूत काढणारी
आजी आज खूप
आठवते....

आपल्या छोट्यातल्या
छोट्या गोष्टींतला आनंद
पासून खुश होणारी
आजी आज खूप
आठवते...

तुला जाऊन खूप काळ
लोटलाय पण आजही तू
खूप आठवते....

#आजी-नाथ
#श्रद्धा

Sanskruti Shelke, Batch 2022

EXPERIENCE SHARED BY CHINMAY BONDRE

Pillai HOC College of Engineering and Technology (PHCET) is a renowned institution that stands as a beacon of academic excellence and innovation. This college is committed to nurturing the intellectual and professional growth of its students. PHCET places a strong emphasis on practical, hands-on learning, with well-equipped laboratories and workshops that enable students to apply theoretical knowledge to real-world scenarios. The college also encourages research and innovation, providing students with the resources and support needed to engage in cutting-edge projects. In this college we enhance our overall growth and challenge our potential fully to reach the glory of zenith. The college takes pride in its holistic approach to education, fostering not only academic excellence but also the overall personality development of its students. Various extracurricular activities, clubs, and events provide students with opportunities to showcase their talents and develop leadership skills. This College has maintains strong industry connections, facilitating internships, industrial visits, and guest lectures from professionals in the field. This ensures that students are well-prepared to meet the demands of the rapidly evolving technology landscape.

Chinmay Bondre, Batch 2016

EXPERIENCE SHARED BY ISHA MORE

As a proud graduate of Pillai HOC college of engineering and Technology, I am filled with a sense of gratitude and accomplishment as I look back on my years spent at this esteemed institution. The journey from a wide-eyed freshman to a confident graduate has been nothing short of transformative, and I am eager to express my deep appreciation for the valuable experiences and lessons that have shaped me
into the individual I am today.

From the moment I stepped onto the campus of Pillai HOC, I was welcomed into a vibrant community that fostered academic excellence, personal growth, and a spirit of inclusivity. The engaging and passionate faculty members not only imparted knowledge but also inspired me to think critically, explore new ideas, and push the boundaries of my own potential. Their mentorship and unwavering support have been instrumental in my academic success and have left an indelible mark on my intellectual development.

Beyond the classroom, Pillai HOC provided a rich tapestry of extracurricular activities, volunteer opportunities, and cultural events that allowed me to broaden my horizons, develop leadership skills, and form lifelong friendships. Whether it was participating in student organizations, conducting research projects, or engaging in community service initiatives, I found a wealth of avenues to apply my learning and make a positive impact within and beyond the campus.

As I reflect on my college experience, I am struck by the invaluable role that Pillai HOC has played in shaping not only my academic prowess but also my character and worldview. The ethos of excellence, integrity, and innovation that permeates this institution has instilled in me a strong sense of purpose and a commitment to lifelong learning and personal growth.

In conclusion, I am immensely grateful for the privilege of being a part of the Pillai community. The knowledge, skills, and friendships that I have gained during my time here will undoubtedly serve as the foundation for my future endeavors.

Isha More, Batch 2021

DEPARTMENT OF INFORMATION TECHNOLOGY

AN OVERVIEW OF 6G MOBILE NETWORK

I The demand for multimedia data services has grown up rapidly over the years. Fifth generation (5G) wireless communication which has been deployed in a lot of countries will not be able to meet up with users demand based on the estimated mobile traffic volume of

users in the next few years. Therefore, the sixth generation (6G) communication has been proposed to address the constraints/ limitations of 5G communication. 6G systems will operate in the millimeter wave (mm Wave) and terahertz region which has larger bandwidth and offers higher data rate than 5G systems. 6G has a lot of opportunities like high-definition

imaging, frequency spectroscopy, accurate localization and sensing, There are a lot of opportunities for sensing at higher frequencies because of fine resolution in all physical dimensions (range, Doppler and angle). Moreover, localization and sensing in 6G is made possible by the key enablers technologies which are: the use of new radio band for communication, intelligent beam-space incorpora-tion of intelligent surfaces, artificial intelligence and machine learning methods G is envisioned as the next significant leap in wireless connectivity, aiming to provide users with even faster speeds, greater capacity, and enhanced reliability. While 5G is expected to deliver speeds of up to 10 gigabits per second (Gbps), 6G is projected to provide data transfer rates of up to 100 gigabits per second, setting the stage for ultra-high-definition video streaming, immersive augmented and virtual reality experiences, and more.Apart from speed, 6G is expected to offer significantly lower latency. This near-instantaneous communication will enable advancements in areas such as real-time remote surgery,

autonomous vehicles, and other latency-sensitive applications. Additionally, 6G is anticipated to leverage advanced technologies like terahertz (THz) frequencies, which operate at much higher frequencies than the current millimeter-wave (mm Wave) spectrum used in 5G. Furthermore, 6G is expected to have a transformative impact on industries like healthcare, agriculture, transportation, and manufacturing. With its capabilities, it could revolutionize telemedicine, enable precision agriculture with improved connectivity for sensors and drones, support fully autonomous vehicles, and facilitate smart factories through seamless connectivity and communication. However, it is important to note that the development and deployment of 6G are in the early stages. Researchers are still exploring various technologies, frequencies, and network architectures to lay the groundwork for the future network. Standardization organizations, like the International Telecommunication Union (ITU), are starting to gather requirements and develop the framework for 6G, but the final specifications

and global deployment are expected to be years away.6G is expected to utilize the terahertz frequency band for higher data rates, ultra-low latency, and massive device connectivity.

Anurag Verma , Batch 2020

KICKING GOALS ON AND OFF THE FIELD – MY IT ENGINEERING JOURNEY AT PILLAI'S

It is with great enthusiasm that me Mr. Oswin D'silva share my success story, a journey that unfolded at Pillai HOC college of engineering and technology, where I seamlessly blended my passion for IT engineering with the love for football. The experience at Pillai's not only shaped my technical skills but also allowed me to kick goals both metaphorically and on the football field.

IWhen I first stepped onto the campus, I was drawn to Pillai's for its outstanding IT engineering program. Little did I know that this institution would not only provide me with a stellar education but also become the backdrop for my football triumphs. The faculty's dedication to excellence and the cutting-edge curriculum laid a solid foundation for my IT engineering career. Simultaneously, Pillai's recognized the importance of a holistic approach to education. The encouragement of extracurricular activities, including sports, allowed me to pursue my passion for football at a competitive level. The colleges commitment to fostering athletic talent and providing state-of-the-art sports facilities created an environment where I could not only excel academically but also shine on the football field.

Balancing the rigorous demands of IT engineering studies with a grueling football schedule was challenging, but the unwavering support of the faculty and their understanding of the dual commitments made it possible. The discipline, teamwork, and leadership skills I developed on the football field seamlessly translated into my academic pursuits, enhancing my overall growth as an individual. Representing Pillai's on the football field at various intercollegiate competitions and tournaments was not just a source of pride but a testament to the college's commitment to nurturing well-rounded individuals. The camaraderie built with teammates and the life lessons learned through victories and defeats became an integral part of my personal and professional character.

my success to the holistic education and support I received at Pillai's. The institution not only prepared me for a rewarding career in technology but also instilled in me the values of teamwork, discipline, and perseverance that are essential both on the field and in the workplace. To prospective students considering Pillai's, I wholeheartedly recommend this institution for its commitment to nurturing diverse talents. At Pillai's, you don't just earn a degree; you graduate as a well-rounded individual prepared to kick goals in your chosen field and on the football field.

Thank you, Pillai's, for being the cornerstone of my academic and athletic success.

Oswin D' Silva , Batch 2019

FROM BYTES TO PIXELS: A TALE OF IT ENGG, GRAPHIC DESIGN, AND PHOTOGRAPHY AT PILLAI'S

I Mr Nishant Patil thrilled to pen down my journey of success that unfolded at Pillai's, an institution where I seamlessly committed to my passion for IT engineering with a deep love for graphic design and photography. My time at Pillai's has been nothing short of extraordinary, shaping not only my technical acumen but also nurturing my creative spirit.

Choosing Pillai's for my IT engineering education was a decision grounded in its stellar reputation and forward-thinking approach to technology.

Little did I know that this institution would become the canvas on which I painted not just lines of code but also vibrant strokes of graphic design and captivating snapshots through my lens. The faculty at Pillai's played a pivotal role in my journey. Their commitment to academic excellence and their encouragement of interdisciplinary exploration allowed me to seamlessly integrate my passion for graphic design into my IT engineering studies. The state-of-the-art design labs and mentorship from faculty members who understood the synergy between technology and design became the catalyst for my creative expression.

Balancing the analytical demands of IT engineering with the imaginative realms of graphic design and photography was indeed a challenge. However, the supportive ecosystem at Pillai's, coupled with understanding faculty members, allowed me to embark on projects that seamlessly blended the worlds of technology and artistic expression. Balancing the analytical demands of IT engineering with the imaginative realms of graphic design and photography was indeed a challenge. However, the supportive ecosystem at Pillai's, coupled with understanding faculty members, allowed me to embark on projects that seamlessly blended the worlds of technology and artistic expression. Upon graduation from Pillai's, armed with a degree in IT engineering and a portfolio that mirrored my proficiency in graphic design and photography, I stepped into the professional arena with confidence. The versatility to navigate between the structured world of coding and the free-flowing creativity demanded by graphic design and photography set me apart in the competitive landscape.

To prospective students considering Pillai's, I wholeheartedly recommend this institution for its commitment to nurturing diverse talents. At Pillai's, you don't just earn an IT engineering degree; you graduate as a multifaceted individual, capable of harnessing

the power of technology while expressing creativity through graphic design and photography.

Thank you, Pillai's, for being the catalyst for my success in both the logical and artistic realms.

Nishant Patil , Batch 2023

UNLEASHING INNOVATION: MY JOURNEY AS A SMART INDIA HACKATHON WINNER

As an alumnus of our esteemed college, I find myself reminiscing about the exhilarating experience that was the Smart India Hackathon. The competition not only tested our technical prowess but also fueled our passion for innovation. Today, I take pride in sharing my journey as a winner of this prestigious hackathon. The journey began with a challenge statement that intrigued our team. The excitement was palpable as we delved into brainstorming sessions, fueled by creativity and a collective desire to make a meaningful impact. Collaborating with my brilliant teammates, we embarked on a journey of problem-solving and ideation, fueled by the spirit of innovation. The sleepless nights spent coding and debugging were nothing short of a roller coaster ride. The pressure was immense, but so was our determination. The sense of camaraderie among the participants, combined with the mentorship provided by industry experts, made the entire experience truly enriching

One of the defining moments was the moment of truth during the final presentation. As we showcased our solution to a panel of esteemed judges, the sense of accomplishment was overwhelming. The countless hours of hard work and dedication had culminated in a solution that not only addressed the problem at hand but also showcased the potential for real-world application. Winning the Smart India Hackathon was not just about claiming a title; it was a testament to our ability to innovate under pressure. The post-hackathon phase brought with it a sense of recognition and pride for our college. The victory not only elevated our standing in the academic community but also opened doors to opportunities for collaboration and further innovation. As I reflect on my journey from a participant to a Smart India Hackathon winner, I can't help but be grateful for the platform that our college provided. The hackathon was not just a competition; it was a transformative experience that shaped my perspective on problem-solving and innovation. In conclusion, I am proud to be an alum of an institution that fosters such a culture of excellence and grateful for the experiences that have shaped me into the innovator I am today.

Nitish Shetty, Batch 2023

A MONTH TO REMEMBER: THE JOURNEY OF EXCELLENCE – EMPLOYEE OF THE MONTH

The bustling corridors of our organization, where dedication meets achievement, I recently found myself standing in the spotlight, honored with the prestigious Employee of the Month award. This recognition is not just a personal triumph but a testament to the collective efforts of a team driven by passion, innovation, and a relentless pursuit of excellence.

The bustling corridors of our organization, where dedication meets achievement, I recently found myself standing in the spotlight, honored with the prestigious Employee of the Month award. This recognition is not just a personal triumph but a testament to the collective efforts of a team driven by passion, innovation, and a relentless pursuit of excellence.

I. The Spark of Commitment:

My journey towards earning the Employee of the Month accolade began with a deep-rooted commitment to my work and a passion for contributing meaningfully to our organization. Recognizing that every task, big or small, played a crucial role in our collective success, I approached each assignment with dedication and enthusiasm

II. Going Above and Beyond:

To stand out in a competitive and dynamic work environment, it became clear that going above and beyond the call of duty was necessary. I consistently sought opportunities to contribute beyond my designated responsibilities, taking on additional tasks, and collaborating with colleagues across departments to ensure the seamless execution of projects.

III. Innovation and Problem-Solving:

The road to success is often paved with challenges, and my approach was to view each obstacle as an opportunity for innovation. Whether it was finding creative solutions to complex problems or introducing streamlined processes, I embraced a mindset that encouraged continuous improvement and efficiency.

IV. Team Collaboration:

Success is seldom an individual endeavor, and my achievements are intricately woven into the collaborative spirit of our team.

Through open communication, mutual support, and a shared commitment to our goals, we were able to foster an environment where every team members strengths complemented one another.

V. Embracing Feedback and Growth:

A crucial aspect of my success story is the willingness to embrace feedback and a commitment to continuous growth. Constructive criticism became a valuable tool for refinement, and I actively sought opportunities for professional development to enhance my skills and contribute even more effectively to the team.

VI. Gratitude and Acknowledgment:

The Employee of the Month award is not just a personal triumph but a celebration of the collective efforts of an entire team.

I am grateful for the mentorship, camaraderie, and support of my colleagues and superiors, whose collaborative spirit has been instrumental in achieving our shared goals.
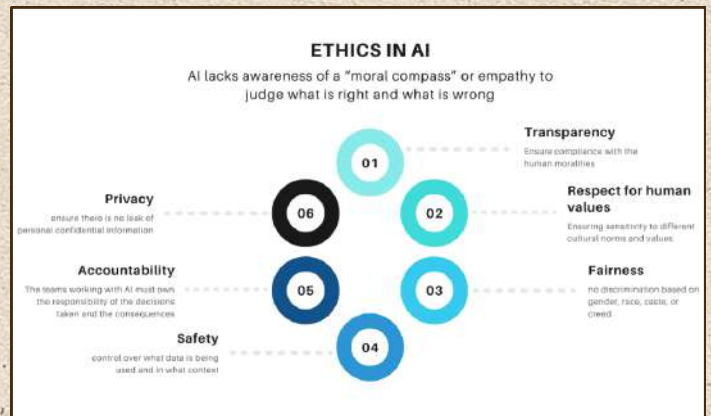
Conclusion:

Earning the Employee of the Month award is a humbling experience, and I share this honor with an incredible team that exemplifies the values of dedication, innovation, and collaboration. As I reflect on this achievement, I am inspired to continue pushing boundaries, embracing challenges, and contributing to the continued success of our organization. This recognition is not just a milestone but a reminder that, together, we can achieve greatness.

Suraj Borate, Batch 2018

THE ETHICS OF AI: EXPLORING THE IMPLICATIONS OF AUTONOMOUS SYSTEMS

Artificial intelligence (AI) has the potential to revolutionize our lives, from healthcare and education to transportation and communication. But as AI becomes more sophisticated and autonomous, it raises ethical questions about its impact on society. In this article, we will explore the ethical implications of AI and the need for ethical guidelines to ensure that AI is developed and used responsibly.

ETHICS IN AI
AI lacks awareness of a "moral compass" or empathy to judge what is right and what is wrong

01 Transparency — Ensure compliance with the human moralities
02 Respect for human values — Ensuring sensitivity to different cultural norms and values
03 Fairness — no discrimination based on gender, race, caste, or creed
04 Safety — control over what data is being used and in what context
05 Accountability — The teams working with AI must own the responsibility of the decisions taken and the consequences.
06 Privacy — ensure there is no leak of personal confidential information

One of the key ethical concerns around AI is the potential for bias. AI systems are only as unbiased as the data that they are trained on, and if that data is biased, then the AI system will also be biased. This can lead to discrimination against certain groups of people, particularly those who are underrepresented in the data. For example, facial recognition software has been shown to have higher error rates for people of color and women, highlighting the need for ethical guidelines to ensure that AI is developed in a fair and unbiased way.

Another ethical concern is the potential for AI to take over jobs that are currently performed by humans.

Some of the key principles that should be included in these guidelines include transparency, accountability, fairness, and privacy. AI systems should be transparent, with developers and users able to understand how they work and what data they use. There should also be mechanisms in place for holding individuals and organizations accountable for the actions of autonomous systems. AI systems should be developed in a fair and unbiased way, and there should be safeguards in place to ensure that they do not perpetuate discrimination or inequality. Finally, there should be strict guidelines around the collection, storage, and use of personal data to protect privacy and prevent misuse.

Conclusion:

As AI becomes more sophisticated and autonomous, it raises ethical questions about its impact on society. To ensure that AI is developed and used responsibly, there is a need for ethical guidelines that address concerns around bias, job displacement, accountability, privacy, and surveillance. These guidelines should be developed in collaboration with experts and diverse stakeholders to ensure that they are fair, transparent, and equitable. By addressing these ethical concerns, we can ensure that AI is developed and used in ways that benefit society as a whole, rather than just a select few.

Rasika Patil, Batch 2022

MY SUCCESS STORIES OF THE YEAR.

My Background

I have developed my career as a Remote Support Engineer(L1) at Reliance(Jio) having been with the company for 1 years. My passion from previous experiences has been instrumental in this journey. However, I cannot claim sole credit for my successes, as it's indeed been a team effort that has shaped me into who I am today.

The transition from Network Engineer to Remote Support Engineer was challenging at times. Still, I could secure this rightful position through the guidance and support of my manager, team leads(L2), and colleagues. I continue to offer my team the same support and advice as their Remote Support Engineer.

My Success Mantra

Working at GetIT(Reliance Jio), I frequently had to communicate with external stakeholders. This allowed me to acquire extensive knowledge about the Networking/ Hardware and explore and detect solutions to meet the project goals. This ignited my passion to learn and apply more, earning greater trust from clients and management. Interacting with our global client was my favorite part, as it significantly enhanced my communication, articulation, and interpersonal skills. I am grateful to GetIT(Reliance Jio) for providing me a platform to learn, adapt, and apply my creativity and ideas.

Cherishable Memories

Throughout my career at GetIT(Reliance Jio), I have had many opportunities to socialize with different teams, taking time to relax and reset for a fresh start.GetIIT encourages team outings, special events, and Work anniversary celebrations. Of all these, the Categories of Indian Festivals Celebrated was the most amazing event.

Work-Life Balance & Patronage

Work-life balance is essential, and it requires appropriate planning and execution to keep up with personal and professional commitments without neglecting either.

A simple tip for achieving a healthy work-life balance is to surround yourself with the right people, as most of your influences come from your immediate circle. By maintaining clear boundaries and choosing to surround yourself with individuals who possess a positive attitude, your efforts to balance work-life priorities will become significantly easier

My Ideas and Carrier Goals

I prefer to set achievable Carrier goals and work diligently towards them. Achieving small milestones can guide us toward great success. I create a feasible strategy and implement it with my team. I ensure the team remains focused on the same goal, leading to expected results and recognition. Nevertheless, at GetIT, I was free to implement my ideas and ensure their achievability.

Carrier Advice for Colleagues

Maintaining an attitude of continuous learning is fundamental for career advancement. Outside of work hours, dedicate time to learning new tools, techniques, or ideas that will enhance and update your skills. Also, it's essential to plan your tasks before you implement them. On numerous occasions, taking ownership of responsibilities increased my team's trust in me and the process. Meanwhile, a polite and humble approach to changes within the group often proved successful. If you're striving to advance your career, embrace responsibilities and adopt a mentality of ownership and leadership.

Equip yourself with updated skills necessary for your workplace through reading and learning more related concepts. Then, apply these newfound skills in your job, noticing your team and management's recognition. Remember, working intelligently often yields better results.

Challenges and Overcoming Them

I am an organized person. So, I am serious about doing tasks right now. However, sometimes things work differently than expected, leading to stress and confusion. It was my colleagues and managers who guided me during these times. I have now learned strategies to complete tasks and address obstacles pleasantly. This helps keep both myself and the team focused and ensures we can work in a peaceful environment.

Reason why i Choose Reliance(Jio)

Honestly, it's not me who chose GetIT(Reliance Jio); they chose me. I devoted myself wholeheartedly to their commitments. I'm hopeful for continuous joy in this journey. I invite my colleagues and newcomers to join in mutual growth through entertainment, effort, and determination. All the very best...!!

Thank you..!!

Chetan Pingale, Batch 2019

DEPARTMENT OF MECHANICAL ENGINEERING

AN OVERVIEW OF NON DESTRUCTIVE TESTING

Non-Destructive Testing (NDT) is a multifaceted field that plays a pivotal role in ensuring the safety, reliability, and quality of materials, components, and structures across diverse industries. The fundamental principle underlying NDT is the examination of materials without causing any damage or alteration to their physical or chemical properties. This characteristic makes NDT particularly valuable for inspecting critical components, as it allows for thorough assessments without compromising the integrity of the tested objects.

1. Purpose and Importance: NDT serves various purposes, including the detection of defects, assessment of material properties, and identification of potential issues that could compromise the performance of structures or components. Its importance lies in its ability to prevent catastrophic failures by uncovering hidden flaws during the early stages of manufacturing, construction, or ongoing operation.

2. Techniques and Methods: NDT encompasses a wide range of techniques, each tailored to specific materials and applications. These methods include Ultrasonic Testing (UT), which uses high-frequency sound waves; Radiographic Testing (RT), employing X-rays or gamma rays; Magnetic Particle Testing (MT), revealing flaws in ferromagnetic materials; Liquid Penetrant Testing (PT), detecting surface-breaking defects; Eddy Current Testing (ECT), relying on electromagnetic induction; and Visual Inspection, the most basic form involving direct observation.

3. Applications in Various Industries: NDT finds applications in numerous industries, such as aerospace, automotive, oil and gas, power generation, construction, and manufacturing. In the aerospace sector, for example, NDT is crucial for ensuring the structural integrity of aircraft components. In the oil and gas industry, it is used to inspect pipelines and pressure vessels, while in manufacturing, NDT ensures the quality of welds, castings, and forgings.

4. Advantages:
- Cost-Effectiveness: NDT is often more cost-effective than destructive testing methods, which may require the sacrifice of samples.
- Usability of Finished Products: NDT allows for the inspection of finished products, providing
- assurance of quality without rendering them unsuitable for use.
- Preventive Maintenance: By identifying defects early on, NDT facilitates preventive maintenance, reducing the risk of unexpected and potentially dangerous failures.

5. Technological Advancements: Advancements in technology continually enhance NDT capabilities. Automation, robotics, and digital imaging have improved inspection speed, accuracy, and the ability to analyse complex data. This on-going innovation ensures that NDT remains at the forefront of quality assurance and safety practices.

6. Regulatory Compliance: Many industries have established standards and regulations that mandate the use of NDT to ensure compliance with safety and quality requirements.

Non-Destructive Testing is a dynamic and evolving field that contributes significantly to the safety and reliability of materials and structures in various industries. Its non-invasive nature, combined with continuous technological advancements, positions NDT as an indispensable tool in quality control, maintenance,

Rohan Shinde, Batch 2015

APPLICATIONS OF MATLAB IN MECHANICAL AND AUTOMOBILE ENGINEERING

Matlab, a powerful numerical computing software, finds diverse applications in the fields of Mechanical and Automobile Engineering. Matlab serves as an indispensable tool in Mechanical and Automobile Engineering, offering a versatile platform for modeling, simulation, analysis, and optimization. Its applications contribute significantly to the advancement and innovation in these engineering disciplines, supporting more efficient and sophisticated designs.

1. Dynamic System Modeling:
   - Matlab provides a comprehensive environment for creating mathematical models of dynamic systems. Engineers can represent mechanical components or entire automotive systems using equations and simulate their behaviour over time. This aids in understanding the dynamic response to various inputs and conditions.
2. Control System Design:
   - Engineers use Matlab control system toolbox to design and analyse control systems. This includes developing mathematical models,

simulating closed-loop responses, and tuning controllers. Matlab facilitates the implementation of control algorithms, ensuring optimal performance and stability in mechanical and automotive systems.

3. Finite Element Analysis (FEA):
   - Matlab is employed in FEA for structural analysis of mechanical components. Engineers can model complex geometries, define material properties, and simulate the behavior of structures under different loading conditions. This aids in identifying potential failure points, optimizing designs, and ensuring structural integrity.
4. Automotive System Simulation:
   - Matlab/Simulink is extensively used to model and simulate various automotive systems. This includes engine performance, transmission dynamics, and vehicle control systems. Engineers can assess the impact of design changes on performance, fuel efficiency, and emissions before physical prototypes are built.
5. Signal and Image Processing:
   - In both Mechanical and Automobile Engineering, Matlab is applied for signal and image processing tasks. For instance, in manufacturing processes, engineers use Matlab to analyse signals from sensors to detect faults or monitor equipment health. Image processing capabilities are utilized for quality control and inspection in automotive manufacturing.
6. Vehicle Dynamics and Simulation:
   - Matlab/Simulink is employed to model and simulate vehicle dynamics, incorporating factors like suspension systems, tire characteristics, and aerodynamics.

7. Computational Fluid Dynamics (CFD):

- Using Matlab in conjunction with toolboxes or external software, engineers can perform CFD simulations to analyse fluid flow around vehicles. This is crucial for optimizing aerodynamics, reducing drag, and improving fuel efficiency in automotive design.

8. Optimization and Design Automation:

- Matlab optimization toolbox enables engineers to find the best design parameters and configurations for mechanical and automotive systems.

Madhavi Chikhale, Batch 2014

ALLOYS AND ITS APPLICATIONS IN MECHANICAL INDUSTRY.

Alloys are pivotal in the mechanical industry, representing a strategic amalgamation of metals to engineer materials with superior properties compared to their constituent elements. These combinations are tailored to meet specific requirements such as enhanced strength, durability, and corrosion resistance. In the intricate landscape of mechanical applications, various alloys play.

indispensable roles.

1. Steel (Iron and Carbon): Steel, a quintessential alloy, is primarily composed of iron and carbon, with trace elements like manganese and chromium. This alloy is ubiquitous in the mechanical industry, finding applications in construction, automotive manufacturing, and machinery production. Its hallmark is a remarkable balance of strength, versatility, and affordability.

2. Aluminium Alloys: Aluminium alloys, characterized by their lightweight nature and excellent corrosion resistance, are prevalent in aerospace, automotive, and construction industries. Thesealloys, often incorporating elements like copper and zinc, contribute to the creation of materials with a high strength-to-weight ratio, crucialfor applications where weight is a critical factor.Your paragraph text

3. Titanium Alloys: Renowned for their exceptional strength-to-density ratio, titanium alloys are extensively utilized in aerospace, medical, and military applications. The alloys unique combination of properties, including corrosion resistance and biocompatibility, makes it invaluable for manufacturing critical components like aircraft parts and medical implants.

4. Brass (Copper and Zinc): The union of copper and zinc results in brass, a versatile alloy employed in electrical components, plumbing fittings, and decorative items. Brass boasts a harmonious blend of corrosion resistance and hardness, making it ideal for applications where both durability and aesthetic appeal are paramount.

5. Bronze (Copper and Tin): Bronze, an alloy of copper and tin, is celebrated for its strength, ductility, and resistance to corrosion. Commonly used in bearings, gears, and artistic creations like statues, bronze stands as a testament to the historical significance of alloys in metallurgy.

6. Nickel Alloys: Nickel alloys, encompassing elements like chromium and molybdenum, thrive in harsh environments. These alloys find applications in chemical processing, aerospace engineering, and power generation due to their high-temperature strength, corrosion resistance, and mechanical robustness.

Subhanahu Tyagi Batch 2018

EMINENT ALUMNI

Ms. Harsha Srivastava
Designation: Director
Company: Onecore India
Pass out Year : M.E. 2020
Branch: Civil

Mr. Akash Prasad Jog
Designation: Director
Company: Jog Infrastructures Pvt. Ltd
Pass out Year : 2017
Branch: Civil

Mr. Amey Rane
Designation: Structural Design
Engineer
Company: Sterling Engg . Consultancy
Pass out Year : 2015
Branch: Civil

Mr. Chetan Telange
Designation: CEO
Company: Chetan Construction
Pass out Year : 2014
Branch: Civil

Mr. Ganesh Nikam
Designation: Manager -Infosec Risk
and Compliance
Company: Pine Labs
Pass out Year : 2016
Branch: EXTC

Mr. Santosh Waghmare
Designation: CEO
Company: Shri Shivguru Electrical
Engineer and Contractor
Pass out Year : 2018
Branch: Electrical

Mr. Rakesh Rane
Designation: Lead Automation QA
Company: Morningstar GMBH
Pass out Year : 2013
Branch: Computer

Mr. A Sahaya Anto Raja
Designation: Manager -Software
Developer
Company: ServiceNow
Pass out Year : 2020
Branch: Computer

Mr. Mohd. Firoz Ansari
Designation: Project Manager
Company: Microsoft
Pass out Year : 2017
Branch: Computer

Ms. Smedha Sarkar
Designation: Founder CEO
Company: EduMaan Training
Services LLP
Pass out Year : 2014
Branch: Computer

Mr. Chetan Pingale
Designation: Remote Support Engineer
Company: Reliance Industries Ltd.
Pass out Year : 2019
Branch: IT

Mr. Harshad Jagtap
Designation: CEO
Company: Team Alloys India
Pass out Year : 2019
Branch: Mechanical

GLIMPSE OF LAST ALUMNI MEET

ALUMNA ASTRAL

FACULTY CO-ORDINATORS

PROF. RAHUL KAPSE
COMPUTER ENGINEERING

PROF. SNEHAL SHINDE
COMPUTER ENGINEERING
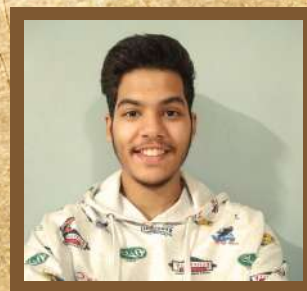
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