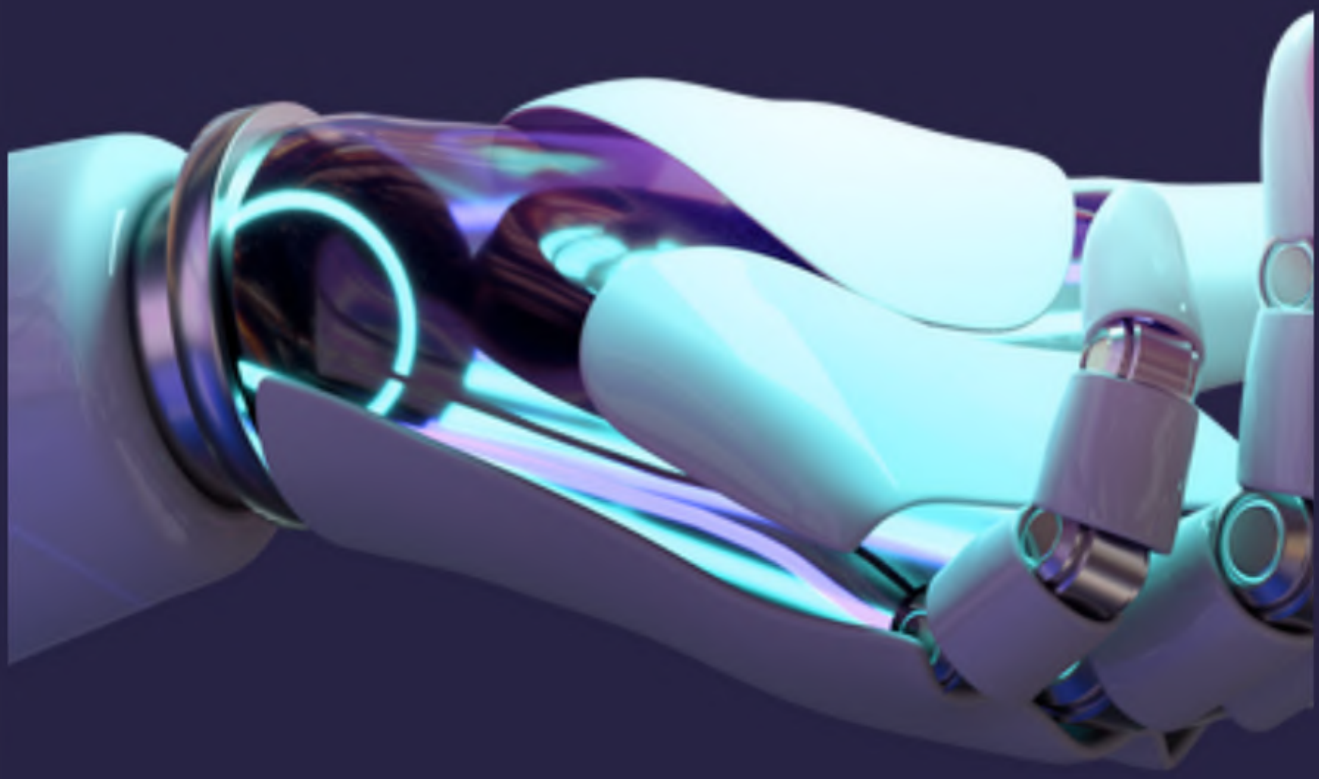
TECHXPRESS

NAVIGATING THE FUTURE OF CSE



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ACKNOWLEDGEMENT

We want to express our sincere gratitude to Prof. S Sundar Manoharan, Director-General of Pandit Deendayal Energy University (PDEU), for granting us the incredible opportunity to represent the CSE Department through the TechXpress Newsletter.

We want to express our sincere gratitude to Prof. Dhaval Pujara, Director of the School of Technology (SOT) at PDEU, for his invaluable suggestions and contributions to this newsletter.

Our appreciation extends to Dr. Shakti Mishra, the Head of the CSE Department, for her constructive input, unwavering support, and dedication, which were instrumental in bringing this newsletter to fruition.

We want to express our sincere appreciation to Dr. Hargeet Kaur, Dr. Shilpa Pandey, and Dr. Yogesh Kumar, the Faculty members in charge of the CSE Newsletter, for their tireless efforts in weaving together the diverse elements of this newsletter, resulting in this remarkable piece of work for our students.

We wish to acknowledge the contributions of all the faculty members of the Computer Science Department, whose constructive suggestions have enriched the content of this newsletter.

The Official Newsletter team aspires that with each article, insight, and achievements, we can draw you closer to the ever-evolving realm of computer science and engineering. We hope you will find TechXpress - The Official Newsletter of The Computer Science Engineering Department, PDEU, not only exciting and encouraging but also a valuable source of information as you navigate its pages.

MESSAGE FROM DEAN-IT AND INFRA

I congratulate the entire editorial team and the Department for the latest edition of newsletter.

In this dynamic era of technological evolution, our field stands at the forefront of shaping the future. It is an exciting moment for all the stakeholders as this edition would serve as an excellent source of information regarding emerging technologies, focusing profoundly on Artificial Intelligence, Machine Learning, Cybersecurity, and Data Privacy. These domains define our present and hold the key to unlocking a myriad of possibilities for the future. We stand witnesses to an significant shift that is rewriting the rules of the I.T. and cyber physical system landscape. In the world of data, where information reigns supreme, we traverse the realms of Data Analytics and Visualization. However, as we embrace the technological surge, we must remember our responsibility towards our planet. I am happy to learn that this edition extends its commitment to innovation beyond the virtual world, venturing into Green IT and Sustainability. By merging technological aspirations with ecological requirements, it is possible to create a digital ecosystem that is both cutting-edge and environmentally conscious. The readers are urged to absorb knowledge and internalize its essence. The future of Computer Science and Engineering is inherently tied to your dedication, creativity, and unyielding passion.

Once again, I wish the team a great success for the unwavering commitment to the world of I.T. and Computer Science. Together, let us navigate the ever-evolving frontiers of our field and make a lasting impact on the future.

Warm Regards.

MESSAGE FROM HEAD OF CSE DEPARTMENT

Dear All,

Welcome to the exciting world of computer science and engineering, where innovation knows no bounds and possibilities are limited only by our imagination. As we embark on this journey together, we are thrilled to present the prologue of our Computer Science Magazine TECHXPRESS, themed "Navigating the Future of CSE."

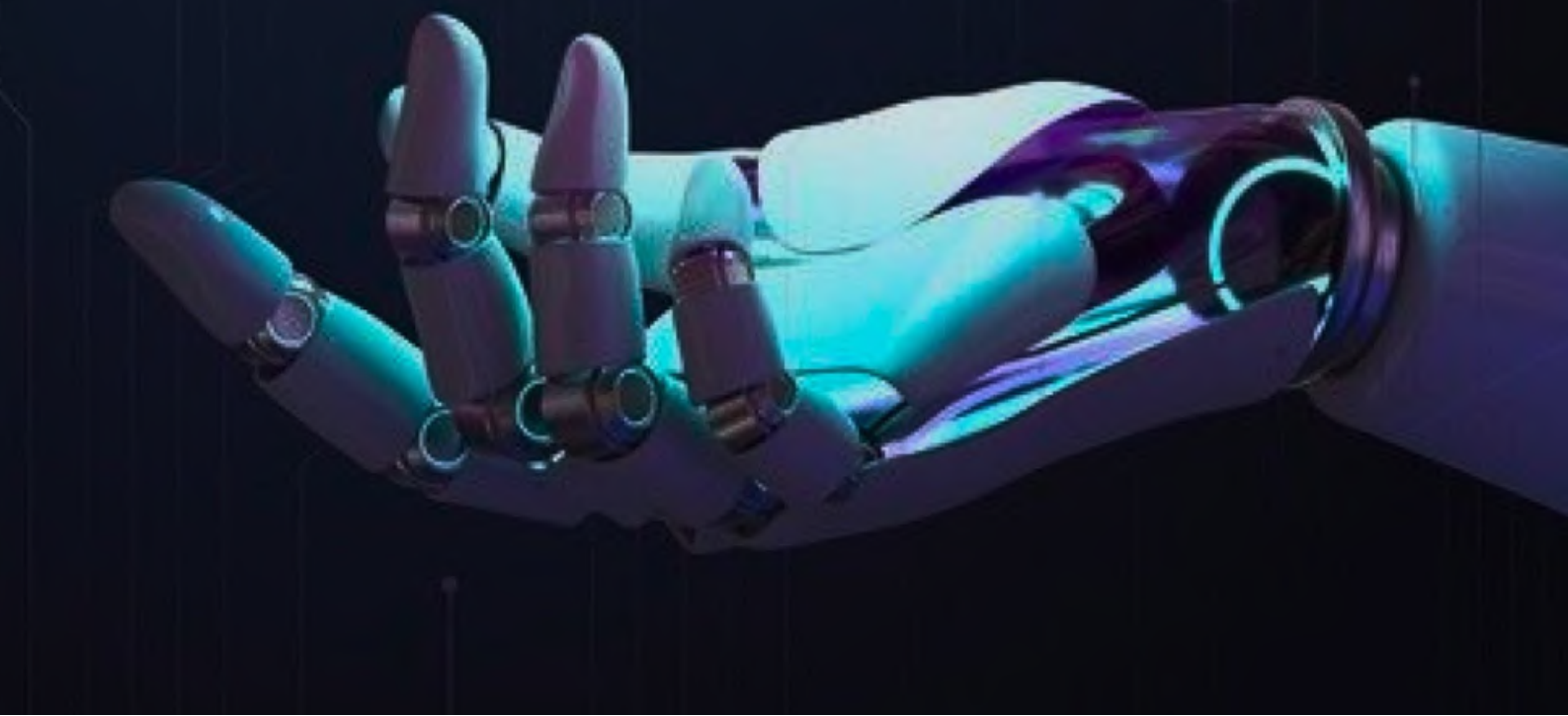
In an era defined by rapid technological advancements, it is imperative for us, the torchbearers of computer science, to navigate this dynamic landscape with vision and purpose. This magazine will serve as a compass, guiding us through the ever-evolving world of computer science, offering insights into cutting-edge research, emerging trends in healthcare, Material science, Green Sustainability, and the transformative power of technology along with the progress we made at the department.

As students, you are the architects of the future, shaping the destiny of this field with your boundless creativity and curiosity. Faculty members, your expertise and mentorship are invaluable in nurturing the next generation of innovators. Together, we will explore topics ranging from artificial intelligence and quantum computing to cybersecurity and ethical considerations, all of which are pivotal in shaping the future of computer science.

Let this magazine be a source of inspiration, knowledge, and collaboration as we chart our course into the uncharted waters of the digital age. Together, we will navigate the future of CSE, harnessing the potential of technology to create a brighter and more connected world.

Sincerely,
Shakti Mishra

Student's Article



SHAPING THE TECH TITANS FUTURE OF IT WORFORCE

~Ansh Soni , 22BCP172

"IT Workforce is an artist which creates masterpiece of productivity"

In today's world the IT industry has made their pillars so strong and profound that it runs the entire world in just a few lines of codes. The basic day to day activities like communication, healthcare, education, agriculture etc. is completely supported by IT workforce.

Basic day to day activities are now integrated with the IT department to an extent that led to boost up in the demand of the IT workforce. Connecting the entire world through emails,video calls,IM, it strengthened the communication lines. For good CRM(customer relationship management) various marketing techniques have been digitalized using commercial softwares. Classroom teaching is flipped into various innovations and e-learning platforms. IoT based monitoring has given a clear picture to farmers regarding the agriculture which helps in sustainable use of resources.

What actually made this generation to find new scopes in IT department and develop future in it?

As we look ahead in the future we can see that the IT companies are going to expand in all fields. Data Analytics is in the eyes of all teenagers as it will organize the data and records too efficiently to boost interpretation and decision making in government and for business purposes. Cloud Computing will reorganize the IT infrastructure management which will optimize the infrastructural costs. Cyber Security will paramount on a high level to safeguard sensitive data, privacy and crimes. Special roles and professional jobs like ethical hacking , security analysts will see heightened demand. A strong ethical framework and sensitivity will be developed in this field.

After COVID-19 various new techniques have been adopted for uniform distribution of work. Work from home has become a new lifestyle for almost every IT company employee and it is also turning out to be beneficial to the company as many costs have been cut off and many other benefits are there for remote and distributed work. Now AI is doing almost all impossible tasks. The IT workforce has helped in automation in all routine tasks such as data analysis, and focus on higher - value tasks that require problem solving, creativity and other skills. In future AI technologies will enhance efficiently in field of innovation and problem-solving techniques.

The workforce will have a great necessity of blending technical and non-technical skills. IT professionals must inculcate teamwork, adaptability and communication skills within themselves to give this industry a new shape. Employees and employers of the future will be defined by their flexibility, adaptability and commitment to lifelong learning. Those who embrace these trends thrive in an ever-changing landscape, shaping the technology landscape while meeting the challenges and opportunities of the digital age. The potential of the IT workforce to drive innovation, respond to global challenges and improve people's experiences is limitless, making it a cornerstone of progress for decades to come.

GREEN SUSTAINABLITY

-Preet Chandak,21BCP069

In the age of rapid technological advancements, the synergy between technology and sustainability has become more crucial than ever. Green IT, a paradigm that aligns information technology with environmental conservation. Green IT, also known as Green Computing, revolves around using technology resources efficiently to minimize its environmental impact and promote sustainability.

The world's increasing demand on IT comes with a significant carbon footprint. Data centres, electronic devices, and digital services contribute to energy consumption and electronic waste. Green IT seeks to address these challenges by incorporating eco-friendly practices into various aspects of IT operations.

One of the pillars of Green IT is energy efficiency. Computers and data centres require substantial energy to function, which often leads to high electricity consumption and greenhouse gas emissions. By adopting energy-efficient hardware, optimizing cooling systems, and implementing power management techniques, the IT industry can significantly reduce its energy consumption and contribute to a lower carbon footprint.

Another aspect of Green IT is the responsible disposal of electronic waste, or e-waste. With the rapid turnover of electronic devices, proper e-waste management is critical. Recycling programs, refurbishing initiatives, and proper disposal methods can help prevent toxic materials from entering landfills and harming the environment.

Cloud computing, a major player in the IT landscape, can also play a role in sustainability. By consolidating resources and providing scalable services, cloud platforms can lead to more efficient resource utilization and reduced energy consumption. Furthermore, virtualization technologies allow multiple virtual machines to run on a single physical server, optimizing hardware usage and minimizing the need for additional equipment.

Software development is another avenue where Green IT principles can shine. Developing energy-efficient software involves coding practices that prioritize minimal resource consumption. This not only helps in reducing energy usage but also enhances the overall performance of applications.

To foster a culture of sustainability, organizations can encourage telecommuting and remote work options. This reduces the need for physical office spaces, leading to lower energy consumption and reduced carbon emissions from daily commutes.

The impact of Green IT extends beyond reducing environmental harm. Companies that embrace sustainability often experience cost savings in the long run. Energy-efficient practices can lead to lower electricity bills, while responsible e-waste management can help avoid fines and legal liabilities associated with improper disposal.

In conclusion, Green IT is an essential step towards creating a more sustainable future. By adopting energy-efficient hardware, optimizing data centre operations, practicing responsible e-waste management, and promoting sustainable software development, the IT industry can significantly reduce its ecological footprint. As the world becomes increasingly digitized, the responsibility lies on individuals, organizations, and policymakers to integrate Green IT practices into their strategies, ensuring a harmonious coexistence between technology and the environment. Through these collective efforts, we can pave the way for a greener and more sustainable tomorrow.

EMERGING TECHNOLOGIES

~Margesh Modi ,21BCP046

Emerging technologies such as artificial intelligence (AI), blockchain, virtual reality (VR), robots, the Internet of Things (IoT), and quantum computing, driven by data analytics, machine learning (ML) algorithms, and automations, improve organizational and individual results.

The fast growth of technology continues to impact every aspect of our lives, reshaping how we communicate, work, and interact with the world around us. A new wave of developing technologies is set to alter our future in unforeseen ways. In this article, we'll look at some of these ground-breaking technologies and consider their possibilities.

The practice of developing computer systems to make intelligent judgements based on context rather than direct input is known as artificial intelligence. It is critical to remember that AI systems always follow the rules that have been set into them. AI is becoming an increasingly important aspect of our daily lives, from self-driving vehicles to virtual assistants, and its impact is only anticipated to rise.

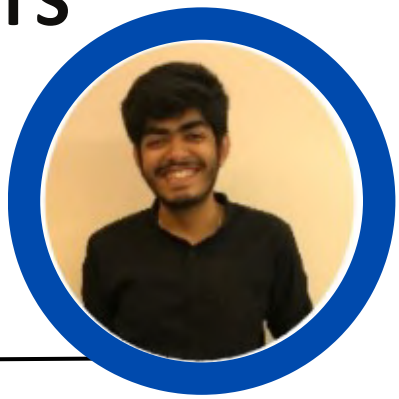
The integration of sensors, actuators, and other devices with the power of internet connectivity is at the heart of IoT. Household appliances and wearable devices, as well as industrial machinery and smart city infrastructure, are examples of these devices. The use of IoT has several advantages which includes Efficiency, Improved quality of life ,Sustainability but it also present challenges that needs to be addressed.

Blockchain stands out among new technologies as a revolutionary force with the capacity to change businesses and reinvent how we think about data, transactions, and trust. Blockchain is an immutable, digitally shared ledger that enables organisations to monitor assets and record transactions inside their network.

A computer-generated environment that duplicates the physical world or generates totally new worlds, allowing users to interact and immerse themselves in a three-dimensional environment is referred to as virtual reality.

In conclusion, these technologies are redefining industries and changing the way we live, work, and interact with the world around us. As we stand at the forefront of this technological revolution, it is critical that we embrace these developing technologies with awe, curiosity, and responsibility. They have the capacity to solve complicated issues, generate economic growth, and enhance people's lives all across the world.

THE EVOLUTION OF DIGITAL TRANSFORMATION AND ITS IMPACT ON INDIVIDUALS AND BUSINESSES



~Akshat Miglani,21BCP055

In today's fast-paced world, where change is the only constant, the concept of digital transformation has emerged as a guiding light for businesses and individuals alike. It's not just a trendy term; it represents a fundamental change in how we communicate, collaborate, and succeed in a world driven by technology.

Digital transformation isn't just about adopting the latest technology; it's about harnessing its power to revolutionize how we live and work Imagine being able to collaborate with colleagues across countries easily, streamline your daily work with seamless apps, and get quick access to an enormous amount of knowledge.

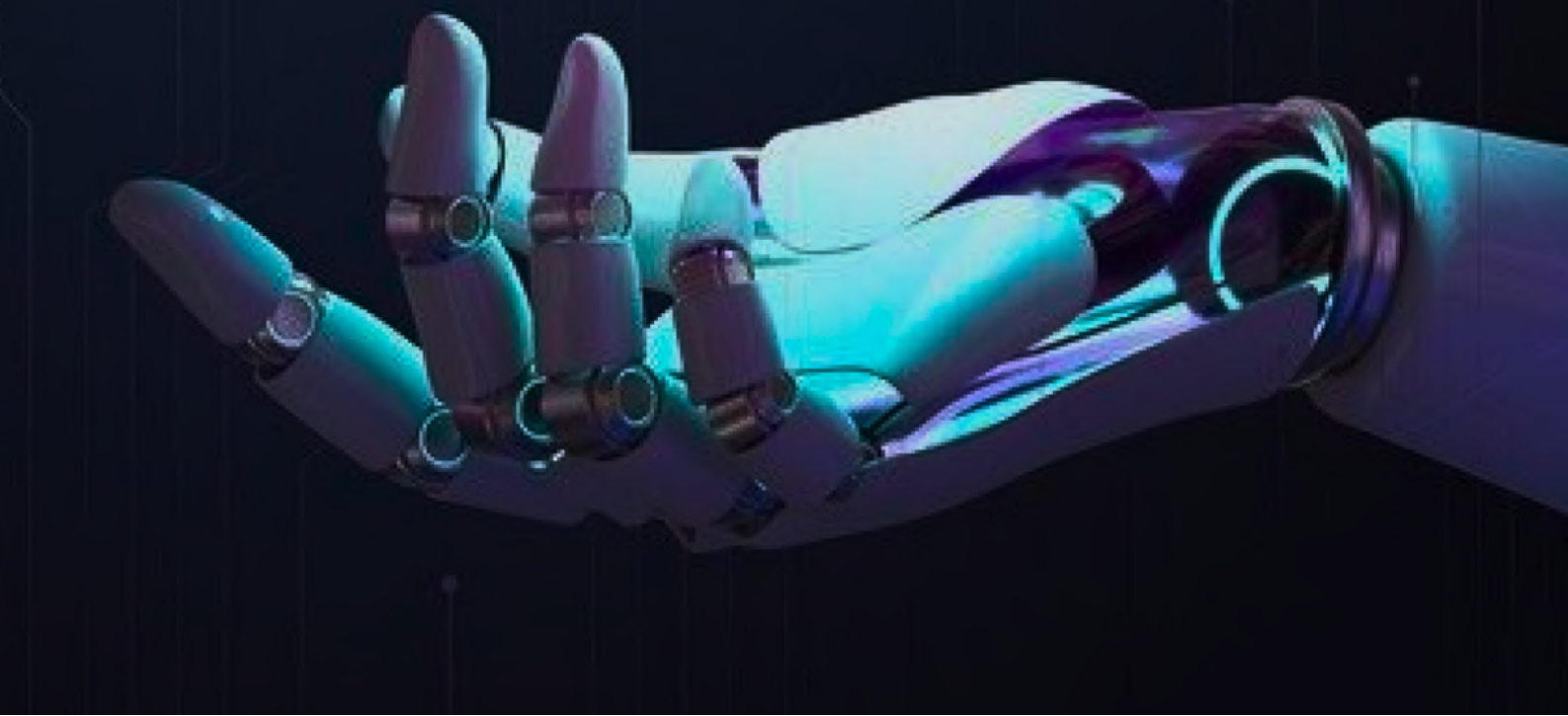
At its core, digital transformation is a journey of evolution. It's about embracing change, not merely for the sake of it, but to enhance our experiences and amplify our capabilities. It's a shift that transcends industries, from healthcare to finance, education to entertainment, leaving no facet of our lives untouched.

One of the most remarkable aspects of this transformation is the empowerment it brings to individuals. As we become more interconnected, opportunities abound. Consider the rise of e-learning platforms that enable anyone, regardless of location, to gain knowledge and skills. Digital transformation breaks down barriers, making education accessible and personalized, fostering a society where learning knows no boundaries. Businesses too stand to gain immensely from this revolution. With data at their fingertips, decision-makers can now make informed choices that drive growth. From small startups to multinational corporations, the digital transformation journey levels the playing field, allowing innovation to flourish.

The magic of digital transformation lies in its ability to enhance human experiences, not replace them. Relationships matter, and technology should facilitate connections, not diminish them. In this digital age, the possibilities are limitless, and it's up to us to harness them for the greater good.

In conclusion, digital transformation is more than just a technological shift; it's a journey of reinvention. It's about utilizing the power of technology to empower individuals, enhance business operations, and elevate our collective potential.

Student Achievements



NAME OF STUDENT	SEM	FACULTY MENTOR/ GUIDE	ACHIEVEMENT NAME	ACHIEVEMENT DETAILS
Reha Shah [21BCP148]	V	Dr. Rajeev Kumar Gupta	National Creativity Aptitude Test (NCAT)	Secured all India 14 rank in category 2
Soham Patel [22MCS007]	III	Dr. Payal Chaudhari	Conference Paper Presented/Published	publishing a paper at ICT4SD Goa 2023 on “A REVIEW ON MULTIMODAL FACE ANTI SPOOFING IN MULTI LAYER ENVIRONMENT”
Soham Vyas [21MDS010]	IV	Dr. Shakti Mishra	Conference Paper Presented/Published	Conference paper titled "The Impacts of Maintenance Weather and aging on Solar Power Generation and Forecasting and Prediction" presented in IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies, Maldives, March 11-12, 2023 on the PDEU Travel Grant.
Rishit , Dubey [22MCS002]	III	Dr. Nishant Doshi	Conference Paper Presented/Published	Published a review paper "A review on Talk-able facial construction" in IEEE I2CT Conference 2023, Pune.

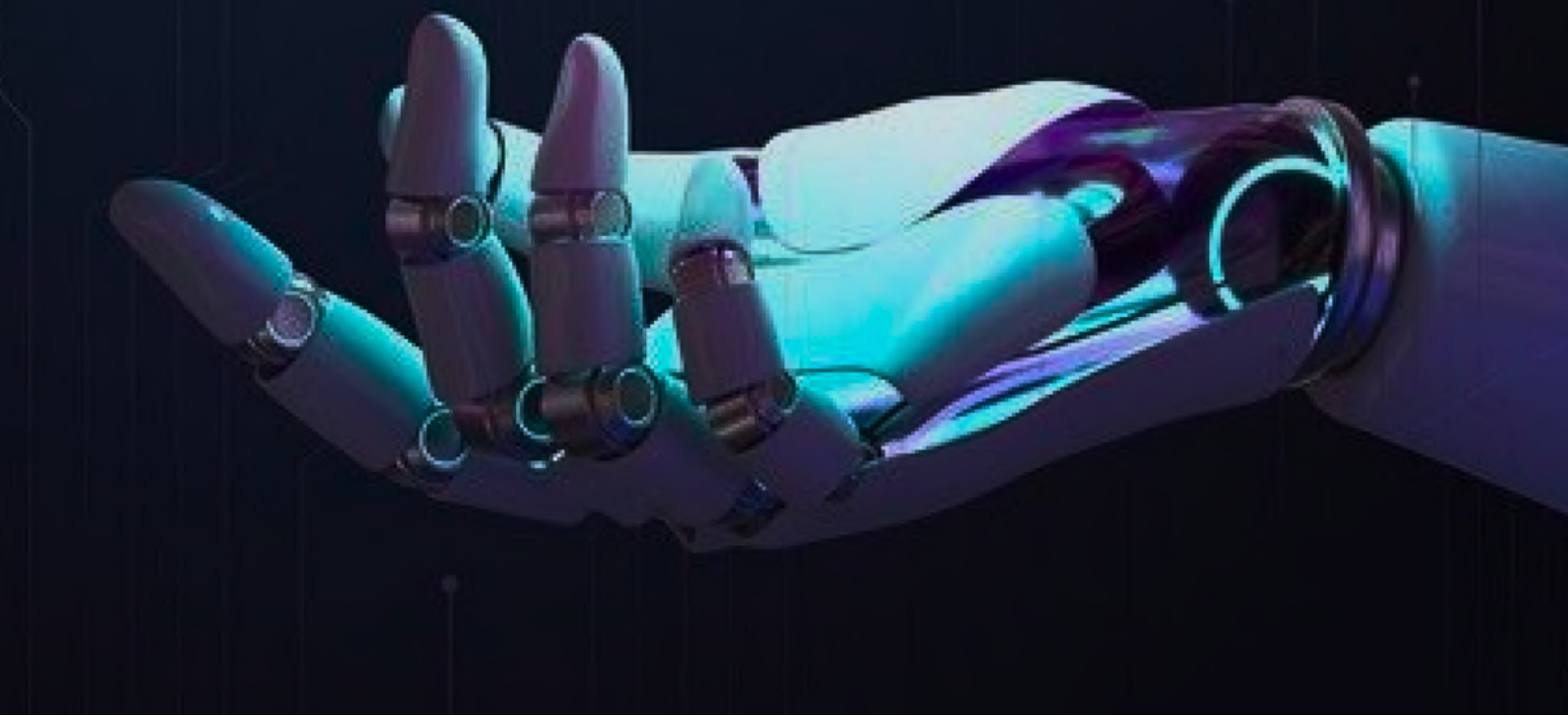
NAME OF STUDENT	SEM	FACULTY MENTOR/GUIDE	ACHIEVEMENT NAME	ACHIEVEMENT DETAILS
Aditya Jethani [21BCP166]	IV	Dr. Sonam Nahar	Getting an Internship off-campus	• Cracked 3 technical rounds and 2 HR rounds for getting an internship at Redpositive OPC PVT LTD for MACHINE LEARNING. Tenure: 4 months. • Selected for GSSOC working as open source contributor for 3 month long competition on GitHub.
Denil Bhatt [21BCP205]	v	Dr. Sonam Nahar	Position in Hackathon	Secured second position in the back-end development track at Hack-NU-Thon 3.0, ITNU
Darshil Sheth, Raj Randive, Anuj Patel, Tithi Dangarwala, Pushkar Kadam [21BCP278, 21BCP378, 21BCP411, 21BCP416, 21BCP372]	V	Dr. Samir B. Patel	National Level II (Proof of Concept) to Level III (prototype) of India's biggestRobotics competition: "ROBOFEST GUJARAT 3.0".	Two lakh cash prize, Level II (Proof of Concept) to Level III (prototype) of India's biggest Robotics competition: "ROBOFEST-GUJARAT 3.0", conducted by GUJCOST. Proof of letter is provided by GUJCOST.
Ketankumar Rathod [20BCP168]	VII	Dr. Shilpa Pandey	Qualified Competitive Exams (Gate/CAT/GPSC/UPSC/IBPS /GMAT/CM AT/ etc.)	Qualified Competitive Exams GATE

NAME OF STUDENT	SEM	FACULTY MENTOR/GUIDE	ACHIEVEMENT NAME	ACHIEVEMENT DETAILS
Kush Shah [20BCP200]	VII	Dr. Shilpa Pandey	Topper NPTEl marketing Analytics Course (Top 2%)	Ranked top 2 in the marketing Analytics course offered by NPTEL
Murli Patel [21BCP107]	V	Dr. Rajeev Kumar	Conference Paper Presented/Published	Paper presented at ICTIS-2023 Conference
Harshit Chodvadiya, Rishit Lunia, Abhisht Chouhan [21BCP122,21BCP347 , 21BCP450D]	V	Dr. Rajeev Kumar Gupta	2nd position in Hackvengers hackathon conducted at Parul University Vadodara	Team Flutter Fleats stood at the 2nd position in Hackvengers hackathon conducted at Parul University Vadodara
Anshumansinh Jadeja, Kush Shah, Mihan Jhaveri [20BCP202, 20BCP200, 20BCP155]	VII	Dr Shilpa Pandey	Journal Paper Published/Accepted	Journal Paper published in GIS Science journal which is Scopus database active journal and an UGC care Group -2 journal published in 10th volume and 4th issue of 2023.

NAME OF STUDENT	SEM	FACULTY MENTOR/ GUIDE	ACHIEVEMENT NAME	ACHIEVEMENT DETAILS
Nabhi Shah, Saumya Shah, Pulak Jain [20BCP004, 20BCP015, 20BCP029]	VII	Dr. Hargeet Kaur	Conference Paper Presented/Published	Paper titled "Exploration of Current Image Cryptography Techniques" published in Proceedings of the 17th INDICom-2023 (10th IEEE International Conference on Computing for Sustainable Global Development)
Priyansh Sanghavi [20BCP313D]	VII	Dr. Hargeet Kaur	Conference Paper Presented/Published	Paper titled "A Comprehensive Study on Cyber Security in Unmanned Aerial Vehicles" published in Proceedings of the 17th INDICom-2023 (10th IEEE International Conference on Computing for Sustainable Global Development)
Prayag Bhatt [21BCP197]	V	Dr Sonam Nahar	2nd Position in Hackathon	2nd position in Tech Holding Track in HackNUthon 4.0 in Nirma University, Ahemdabad

NAME OF STUDENT	SEM	FACULTY MENTOR/GUIDE	ACHIEVEMENT NAME	ACHIEVEMENT DETALS
Hardeep Patel, Nishtha Chaudhari, Meet Kavathiya [20BCP098, 20BCP249, 20BCP039]	VII	Dr. Hargeet Kaur	Conference Paper Presented/Published	Paper titled "An Exploration to Blockchain-based Deep Learning Framework" published in Proceedings of the 17th INDICom-2023 (10th IEEE International Conference on Computing for SustainableGlobal Development)
Vaidehi Desai [20BCP189]	VII	Dr. Shilpa Pandey	Internship and Competitive Programming achievements	• Did SWE Internship at Google Inc. in Summer 2023 • Got rank 14 in ICPC AlgoQueen 2023 • Team qualified for International Collegiate Programming Contest(ICPC) 2023 Amritapuri Regionals and ranked 58
Barbie Sharma, Kunal Kumar Sahoo, Amit Ramrakhyani, Tanish Patel, DishaMewada [21BCP315, 21BCP100, 21BCP318, 21BCP050, 21BME051]	V	Dr. Aditya Shastri	Position in Hackathon	Cleared the 2nd round (Proof Of Concept) in the category of Swarm Robots at ROBOFEST 3.0, GUJCOST. They have a provisional patent under their name and received 1.5 lakhs as prize money.

Faculty Article



Forging a Path

~DR. AMITAVA CHOUDHURY

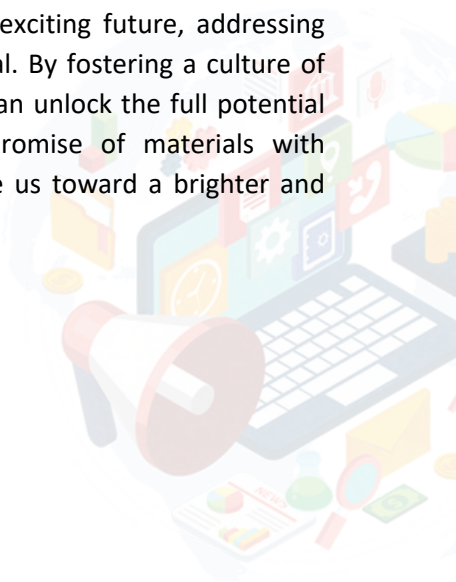
AI AND MACHINE LEARNING'S IMPACT ON MATERIALS SCIENCE INNOVATION

At the crossroads of technological progress, the juncture between computer science and engineering, and materials science is catapulting us into a fresh epoch of exploration and ingenuity. This amalgamation is notably pronounced within the realm of Artificial Intelligence (AI) and Machine Learning (ML), where the potential to revolutionize materials science both exhilarates and poses challenges. Successfully navigating this unexplored terrain is pivotal in unleashing extraordinary breakthroughs that stand to reshape industries and usher in a transformative era for our global landscape. Artificial Intelligence and Machine Learning have emerged as catalysts for the transformations in materials science. The ability of AI algorithms to analyze vast amounts of data and predict material properties with precision is reshaping the way we design, discover, and develop new materials. By harnessing the power of machine learning models, researchers can accelerate the process of identifying materials with specific characteristics, from superconductors to lightweight alloys. This leap in efficiency has the potential to usher in a new era of materials engineering, where the boundaries of possibility are expanded.

Certainly, here are three key applications of Artificial Intelligence and Machine Learning in materials science:

1. **Materials Discovery and Design**: AI and ML algorithms are used to predict and design novel materials with specific properties. Researchers input desired characteristics into these algorithms, which then analyze vast datasets to identify combinations of elements and structures that would yield the desired properties. This application accelerates the process of finding materials for various industries, from aerospace to electronics, by reducing the need for extensive trial and error experimentation.
2. **Predicting Material Properties**: AI and ML models can accurately predict material properties such as strength, conductivity, and thermal expansion. These predictions are based on data from existing materials, eliminating the need for exhaustive testing. This application is particularly valuable for identifying materials that could be used in innovative ways or in demanding environments, like high-temperature applications or extreme pressures.
3. **Quality Control and Manufacturing**: AI-driven quality control processes enhance manufacturing by identifying defects or deviations from desired properties in real-time. This ensures consistent material quality and minimizes waste.

In conclusion, the intersection of computer science and engineering, and materials science is reshaping the landscape of innovation through AI and Machine Learning. As we navigate this exciting future, addressing challenges related to data quality, interpretability, and collaboration will be crucial. By fostering a culture of interdisciplinary teamwork, continuous learning, and responsible innovation, we can unlock the full potential of AI and Machine Learning in materials science. This journey holds the promise of materials with unprecedented properties and applications that will redefine industries and drive us toward a brighter and more sustainable future.



NAVIGATING PLANT RESEARCH THROUGH AI-ML

~Dr. Aditya Shastri

Artificial Intelligence (AI) and Machine Learning (ML) are transformative technologies that have found diverse applications across various industries. In the plant domain, including agriculture, horticulture, and botany, AI and ML are revolutionizing traditional practices by enhancing efficiency, precision, and sustainability.

However, there are various challenges that are faced by current researchers working in this domain as given below:

1. **Rapidly evolving field**: Continuous changes, advancements, and discoveries in the realm of plants make this field evolve rapidly. This includes genetic discoveries, climate change impact, sustainable agriculture, digital transformation, etc.
2. **Data quality and quantity**: Successful implementation of any AI/ ML model depends on large volumes of high-quality data, getting which is often a time-consuming and difficult task.
3. **Interpretable models**: Interpretability of ML models are often required in critical applications like disease prediction, which builds trust among the users and stakeholders.
4. **Technological integration**: The use of AI-driven sensors in agricultural land is very useful to monitor changes, use fertilization, track the growth of crops, aid in the protection of endangered species, etc. However, this can be very expensive and not affordable to all the farmers.
5. **Interdisciplinary nature**: Plant data analysis requires expertise in both biology and data science. Bridging the gap between these disciplines can be daunting.

Based on these challenges, the following sub-domains are identified where research is most important in this domain.

1. ML algorithms to analyze and predict plant genomic data, unlocking valuable insights into gene expression, DNA sequencing, and genetic variation.
2. Development and implementation of deep learning models to accurately detect and diagnose plant diseases, facilitating early intervention and improved crop management.
3. AI-based techniques for plant breeding, phenotype and trait identification, trait optimization, accelerating the development of new varieties.
4. Data mining and pattern recognition in plant transcriptomics and proteomics
5. Use of predictive analytics and decision support systems to enhance breeding programs and biotechnological advancements.

To conclude, AI and ML are reshaping the plant domain by enhancing efficiency, sustainability, and resource management. From precision agriculture to genetic research, these technologies offer innovative solutions to age-old challenges. However, a balanced approach that considers data quality, ethics, and inclusivity is crucial for the proper integration of AI/ ML in the plant domain.

UNVEILING ADVANCEMENTS: THE POWER OF AI TECHNIQUES IN SPINE SURGERY

~Dr. Yogesh Kumar

Spine surgery encompasses a variety of surgical procedures performed on the spine to address various spinal conditions and alleviate pain or neurological symptoms arising from issues affecting the spinal cord, nerves, or vertebral structures. Indications for spine surgery arise when conservative treatments, such as physical therapy, medications, and injections, prove ineffective in managing a patient's symptoms. The types of spine surgery (Figure 1) procedures are tailored to tackle specific spinal issues and conditions. These procedures can be categorized based on their purpose, the chosen approach, and the specific area of the spine being targeted.

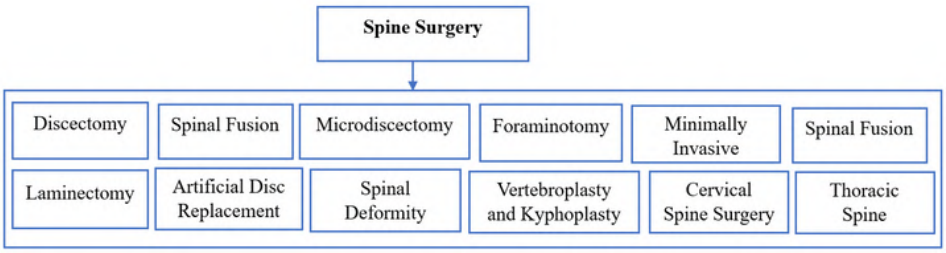


Fig 1. Types of Spine Surgery

In the realm of medical advancement, Artificial Intelligence (AI) has made significant strides across various medical domains, including spine surgery. AI technologies are being actively explored and implemented to enhance the precision, efficiency, and overall outcomes of spine surgeries. One notable facet of AI, deep learning, which is a subset of AI, has emerged as a powerful tool in the field of spine surgery. Deep learning algorithms excel in tasks involving intricate data analysis, pattern recognition, and image interpretation. In the context of spine surgery, deep learning techniques have been effectively applied to various stages of the surgical process, including preoperative planning, intraoperative guidance, and postoperative monitoring. Below are key applications of deep learning in spine surgery:

Medical Image Analysis: Deep learning algorithms demonstrate remarkable proficiency in analyzing intricate medical images, such as CT scans and MRIs. They excel in identifying and segmenting different anatomical structures within the spine, including vertebrae, discs, nerves, and blood vessels. This precise segmentation aids surgeons in comprehending the patient's anatomy and planning surgical procedures with greater accuracy.

Automated Tumor Detection: Deep learning models are trainable to recognize and classify spinal tumors by analyzing medical images.

Surgical Navigation Enhancement: Deep learning algorithms bolster surgical navigation systems by offering real-time guidance. These systems integrate preoperative imaging data with live intraoperative imagery, thereby enabling surgeons to navigate with heightened precision and minimize potential complications.

Robotic-Assisted Surgery: Deep learning algorithms empower robotic systems that collaborate with surgeons during spine surgeries. These systems offer controlled precision and enhanced manoeuvrability, thereby facilitating minimally invasive procedures that are more efficient and effective.

Outcome Prediction: By analyzing historical patient data, deep learning can predict potential surgical outcomes and complications based on similar cases.

Instrumentation Placement: Deep learning models contribute to optimizing the placement of spinal implants, such as screws and rods. They do so by considering patient-specific anatomical variations and pathological conditions.

In conclusion, the integration of deep learning in spine surgery showcases promising potential for advancing surgical precision, patient outcomes, and overall healthcare practices. As medical technology advances, the applications of AI and deep learning in spine surgery are expected to continue evolving, ushering in new possibilities for improved patient care and surgical excellence.

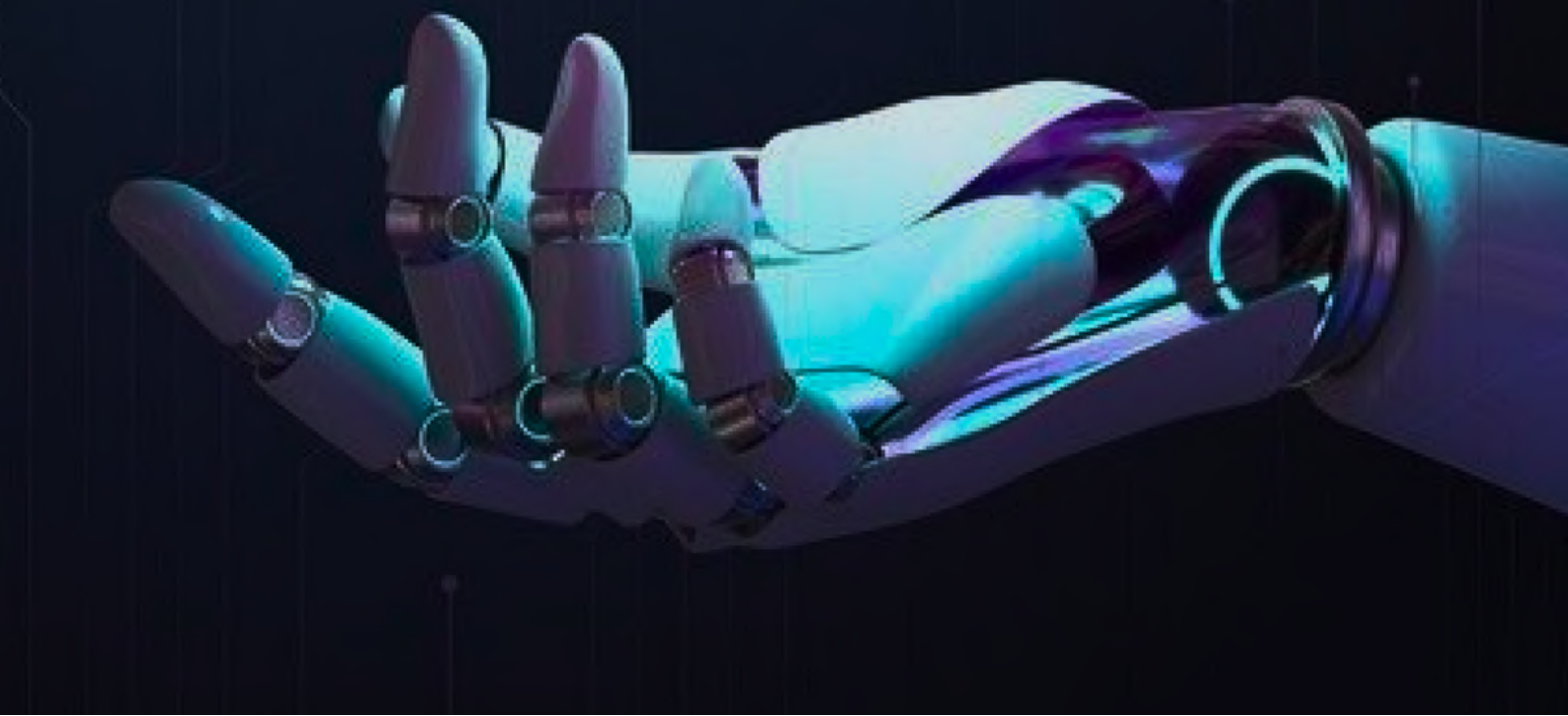
SPATIAL COMPUTING IN EDUCATIONAL LANDSCAPE

Dr. Rutvij H. Jhaveri

Spatial computing is a dynamic fusion of virtual reality (VR), augmented reality (AR), and mixed reality (MR). It has the transformative potential to reshape the educational landscape. Spatial computing can seamlessly combine the physical and digital worlds to create immersive learning environments that go beyond traditional classrooms. It can allow students to explore history, examine complex biological structures, and even journey through outer space. Its true magic lies in its ability to offer hands-on experiences through interactive simulations, empowering learners to manipulate virtual objects, conduct experiments, and unlock complex ideas in a range of subjects from physics to computer science. Complex ideas can be made real and easier to understand by representing them in stunning 3D to turn the abstract into something tangible and to enhance understanding. Moreover, spatial computing can promote collaboration among students to surpass geographical distances to create virtual spaces where teamwork and creativity flourish. It can excel in custom learning paths that suit different learning styles and speeds. It's also highly valuable for learning languages through immersive language experiences. Traditional classrooms can be expanded beyond walls. Virtual field trips would enable students to explore global museums, historical sites, and ecosystems. Even students with unique learning needs can be benefited from spatial computing are inclusive nature, making education truly accessible. Despite the promising potential of spatial computing in education, several challenges need to be addressed for its successful integration: (1) Initial cost and resource requirement to implement spatial computing demands substantial investment in hardware, software, and technical infrastructure. (2) Training and professional development of educators can be time-consuming and might meet resistance from educators who are already accustomed to traditional teaching methods. (3) Privacy and safety for protecting teachers’ and students' personal information, and ensuring a secure virtual environment are paramount. (4) Technical issues, such as poor internet connectivity or hardware/software incompatibility can lead to glitches, latency, and interruptions during lessons which may diminish the effectiveness of spatial computing. (5) Creating high-quality, educational content by developing immersive simulations, interactive experiences, and accurate 3D models requires expertise in both education and technology. (6) Not all students may have access to the necessary devices or stable internet connections required for spatial computing which could lead to an uneven educational experience which can worsen the existing inequalities in education.

To conclude, while spatial computing offers innovative avenues for education, challenges such as cost, educator training, privacy, technical issues, content development, and equity need to be navigated. By addressing these challenges thoughtfully, educational institutions can make use of the full potential of spatial computing to create immersive, effective, and inclusive learning experiences.

Faculty achievement



FACULTY NAME	TITLE	PUBLISHER
Dr. Chintan Bhatt	"Research Paper Awards for 3 Scopus papers"	Charotar University of Science and Technology
	"Senior Member IEEE"	IEEE
	" Reviewer "	Elsevier
	"Reviewer"	IEEE
Dr. Hiren Kumar Thakkar	"Research Paper Award"	Charotar University of Science and Technology
Dr. Shilpa Pandey	"Reviewer" International Conference on Device Intelligence, Computing and Communication Technologies	Graphic Era Deemed to be University, Dehradun
	"Paper Presentation" International Conference on "Advances in Water Treatment and Management	Pandit Deendayal Energy University
Dr. Kaushal Shah	"Session Chair" 10th International Conference on "Computing For Sustainable Global Development 2023	Technically Co-sponsored by IEEE Delhi section held during 15th to 17th March 2023, Bharati Vidyapeeth, New Delhi, India" Bharati Vidyapeeth, New Delhi
Dr. Manish Paliwal	"Co-Convener" 10th International Conference on "Computing For Sustainable Global Development 2023	Technically Co-sponsored by IEEE Delhi section held during 15th to 17th March 2023, Bharati Vidyapeeth, New Delhi, India" Bharati Vidyapeeth, New Delhi

Faculty Patent

NAME OF FACLTY	PATENT /COPYRIGHT	PATENT / COPYRIGHT TITLE	STATUS	DATE
Dr.Rajeev Kumar Gupta	Patent	"A Fully Automatic Washing Machine with Improved Detergent Suction"	Published	01 April 2023
	Patent	"Multipurpose Programmable Breakout Board with Pluggable Lcd Display & Microcontroller for Research"	Published	01 April 2023
Dr. Shakti Mishra, Dr. Chintan Bhatt	Patent	"Modular Device for Multi-Terrain Autonomous Driving for unmanned vehicles"	Filed	02 June 2023
Dr. Yogesh Kumar	Patent	"Explainable Artificial Intelligence based Multi-Imaging System for Prediction and Recommendations of the Eye Diseases"	Filed	17 March 2023

Faculty Books

BOOK TITLE

NAME OF FACULTY	BOOK TITLE	PUBLISHER
Dr. Rajeev Gupta, Dr. Santosh Bharti, Dr. Samir Patel	"Artificial Intelligence Tools and Technologies for Smart Farming and Agriculture Practices"	IGI Global

BOOK CHAPTER

NAME OF FACULTY	CHAPTER TITLE	**ISSN**	PUBLISHER
Dr. Rajeev Gupta	"IoT System for Crop Recommendation based on Soil and Weather Pattern"	978-1-6684-8516-3	IGI Global
	"Deep Learning-Based Agriculture Monitoring and Forecasting"	978-1-6684-8516-3	IGI Global
	"AI-Based Plant Disease Detection and Classification Using Pretrained Models"	978-1-6684-8516-3	IGI Global

Faculty Publications

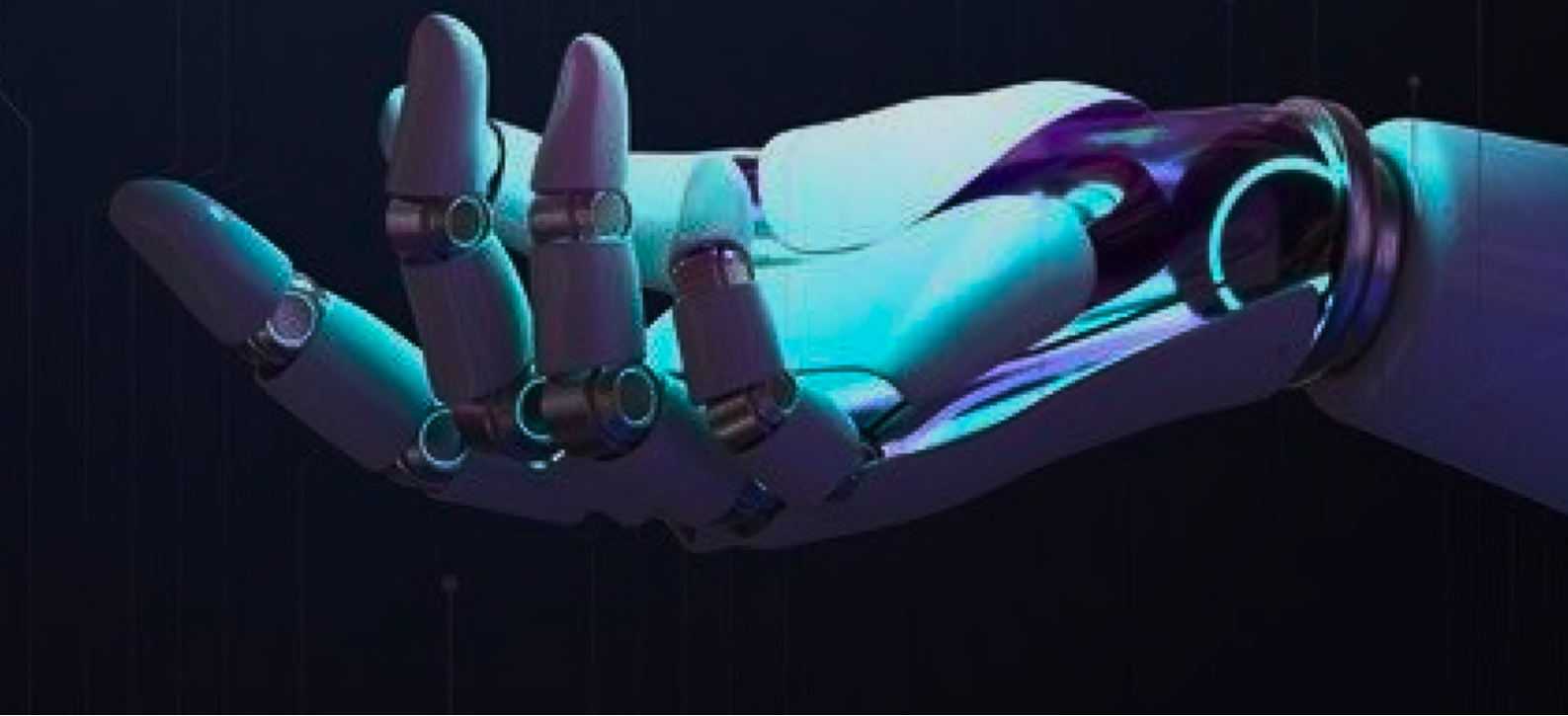
AUTHOR NAME	PAPER NAME	JOURNAL NAME AND PUBLISHER
Dr. Yogesh Kumar	"An Automatic Speech Recognition System: A systematic review and Future directions"	IEEE
	"A Review of Deep Learning-Based Approaches for Detection and Diagnosis of Diverse Classes of Drugs"	Archives of Computational Methods in Engineering, Springer
	"Satellite imagery-based Airbus ship localization and detection using deep learning-based approaches"	Peer-to-Peer Networking and Applications, Springer
	“A Comprehensive Analysis of Deep Learning-Based Approaches for Prediction and Prognosis of Infectious Diseases “	Archives of Computational Methods in Engineering, Springer
	“A Comprehensive Analysis of Deep Learning-Based Approaches for the Prediction of Gastrointestinal Diseases Using Multi-classEndoscopy Images”	Archives of Computational Methods in Engineering, Springer
	“Artificial Intelligence-Based Approaches for Detection and Classification of Different Classes of Malaria Parasites Using Microscopic Images: A Systematic Review”	Archives of Computational Methods in Engineering, Springer
	“A Systematic Review of Different Categories of Plant Disease Detection Using Deep Learning-Based Approaches”	Archives of Computational Methods in Engineering, Springer
	“A Comprehensive Analysis of Artificial Intelligence Techniques for the Prediction and Prognosis of Lifestyle Diseases”	Archives of Computational Methods in Engineering, Springer
Dr. Payal Chaudhri	“Privacy-preserving cost-effective work distribution with fine-grained access control for mobile crowdsensing”	Inderscience

AUTHOR NAME	PDPU STUDENT AS AUTHOR	PAPER NAME	JOURNAL NAME AND PUBLISHER
Dr. Samir Patel	Sanyam Raina, Shreedhar Bhatt, Vaidehi Shah, Heem Amin, Vinay Khilwani	“Basketball Shot Conversion Prediction Using Various ML Techniques and Its Analysis”	Springer - Mobile Computing and Sustainable Informatics
	Khushi Shah, Shakshi Vaghela, Mohmmadali Aglodiya, Rashmi Bhattad	“Water Potability Prediction Using Machine Learning”	Research Square
	Parita Oza	“Patch Extraction and Classifier for Abnormality Classification in Mammography Imaging”	Springer - 3rd International Congress on Intelligent Systems, CIS 2022
	Hemani Parikh	“Modeling PolSAR classification using convolutional neural network with homogeneity based kernel selection”	Modeling Earth Systems and Environment
	-	“Semantic Segmentation on Land Cover Spatial Data Using Various Deep Learning Approaches"	In book: Proceedings of International Conference on Intelligent Vision and Computing (ICIVC 2022)
	Nisarg Mehta	“Distributed Denial of Service Attack Prediction over Software Defined Networks Using Federated Learning”	Research Square
	Hemani Parikh	“Evaluation of deep learning and transform domain feature extraction techniques for land cover classification: balancing through augmentation”	Environmental Science and Pollution Research
	Jeet Kanani, Badal Parmar, Moksh Vaghasia, Krishna Pate	“Big Data Predictive Analytics Model for Cardiovascular Risk Detection using Machine Learning Techniques”	IEEE
	Badal Parmar, Jeet Kanani, Moksh Vaghasia, Krishna Patel	“Cardio-Vascular Risk Detection System using different Machine Learning Techniques”	IEEE
	Madhuri Patel	“Visual Analysis of Thane Intelligent Transport System”	IEEE

AUTHOR NAME	PDPU STUDENT AS AUTHOR	PAPER NAME	JOURNAL NAME AND PUBLISHER
Dr. Nishant Doshi	-	“An enhanced constant length traceable CP-ABE in IoT paradigm”	InderScience
	-	“LDA-2IoT: A level dependent authentication using two factor for IoT paradigm”	Elsevier
Dr. Shakti Mishra	Soham Vyas, Sanskar Bhuwaniya	“The Impacts of Maintenance Weather and Aging on Solar Power Generation Forecasting and Prediction”	IEEE
	Kinshuk Gaurav Singh, Charul CHovadiya, Soham Vyas	“Prediction of Solar Power Generation and Maintenance Activities for 1MW Power Plant”	IEEE
Dr. Rutvij H. Jhaver	-	“Performance Analysis of Satellite-Vehicle Networks With a Non-Terrestrial Vehicle”	IEEE Transactions on Intelligent Vehicles (TIV), IEEE
	-	“Transfer Learning-based Forensic Analysis and Classification of E-Mail Content”	IEEE Transactions on Intelligent Vehicles (TIV), IEEE
	-	“Towards Network-aware Query Execution Systems in Large Datacenters”	IEEE Transactions on Network and Service Management
Dr. Pooja Shah	-	“MENTAL HEALTHCARE ANALYSIS USING POWER BI & MACHINE LEARNING”	IEEE
	-	“Empirical Analysis of Hybrid Classical Variational Quantum Neural Networks for Target Classification from SAR Data”	LNNE series, Springer
	-	“A Comparative Study on the Modern Deep Learning Architectures For Predicting Nutritional Deficiency in Rice Plants”	IEEE

AUTHOR NAME	PDPU STUDENT AS AUTHOR	PAPER NAME	JOURNAL NAME AND PUBLISHER
Dr. Pooja Shah	-	“Handwritten Gujarati Character Recognition Using Machine Learning and Deep Learning”	Atlantis Press, SpringerNature
	-	“Automated Photomontage Generation with Neural Style Transfer”	Elsevier
Dr. Chintan Bhatt	-	“SignExplainer: An Explainable AI-Enabled Framework for Sign Language Recognition With Ensemble Learning”	IEEE Access
	-	“Emotion Recognition System via Facial Expressions and Speech Using Machine Learning and Deep Learning Techniques”	SN Computer Science
Dr. Kaushal Shah	Maitri Surti, Vyom Shah, Yogi Makadiya	“Exploring Cyber Security Issues in the Internet of Healthcare Things (IoHT) with Potential Improvements”	Springer
	Yogi Makadiya, Rutvi Virparia	“IoT Forensics System based on Blockchain”	IEEE
Dr. Tanmay Bhowmik	-	“Hybrid deep learning approach for stress detection using decomposed EEG signal”	Diagnostics, MDPI
Dr. Rajeev Kumar Gupta	-	“Capturing Uncertainties through Log Analysis Using DevOps”	International Journal of Data Mining, Modelling and Management
Dr. Manish Paliwal	Tanvi Modi, Jinal Patel	“Enhancing Medical Domain Data Security using Inbuilt Data Encryption and Steganography”	IEEE
Dr. Debabrata Swain	-	“Enhanced handwritten digit recognition using optimally selected optimizer for an ANN”	Multimedia tools and Application

Events



Introduction to AR-VR Technology

1.**Name of Speaker** : Mr. Vimal Rughani

2. **Date of the Event:** 13th April, 2023

3.**Theme of the Event**: Augmented Realityand Virtual Reality

4. **Description**:-

- The event focused on the theme of Augmented Reality and Virtual Realityand attracted around 50 participants.
- The session was hands-on and provided an introduction to AR and VR technologies, theirapplications, and their impact on various industries.

Live Demo on AR-VR Technology

1.Name of Speaker(s)/Resource Persons (with Contact Details): Rakul R.S., Project Manager, ARK Infosolutions Pvt. Ltd.

2.Date of the Event: 20th April, 2023

3.Theme of the Event: Augmented Reality and Virtual Reality [AR-VR]

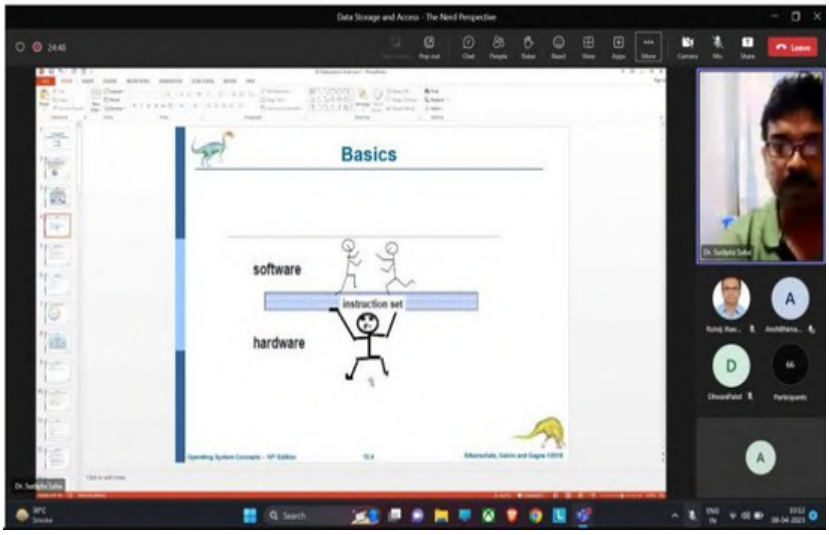
4. Description:-

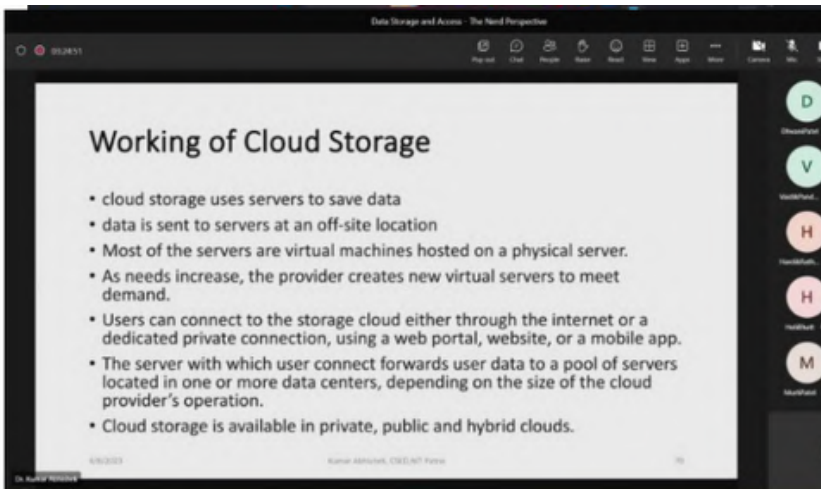
- The live demo of AR-VR was held on 20th January 2023, organized by the PDEU ACM-Women Student Chapter, Department of Computer Science and Engineering The event focused on the theme of Augmented Reality and Virtual Reality and attracted around 40 participants.
- The session was hands-on and provided a demo on AR and VR technologies, their applications, and their impact on various industries. The participants experienced live environment of mechanical factory (welding devices, furnace), parts packing-unpacking, roller coaster and human body organs.

Data Storage and Access - The Nerd Perspective

1.**Name of Speaker:**-Dr. Sudipta Saha, Dr. Kumar Abhishek,
2.**Date of the Event**:- 8th April,2023
3.**Theme of the Event**: Data Storage and Access in Operating Systems
4.**Description**:-

- Participants learned about data storage and access from an operating systems perspective involve managing storage devices, file systems, file operations, disk management, access control, caching, and virtual memory.
- They also learned about how operating systems handle tasks such as organizing data with file systems, managing file operations, participating and formatting storage devices, enforcing access control, implementing caching for improved performance and utilizing virtual memory to optimize memory usage.





Hands-on workshop on Mastering UI/UX Prototyping with Figma

1.**Name of Speaker(s)** : Mr. ChintanUdani, Ms. ShailjaMakwana

2. **Event Date**: 8th April,2023

3.**Description**:-

- Inthis workshop participants learnt how to utilise Figmafor UI/UX prototyping, starting with the fundamentals and progressing to more sophisticated approaches during the course of this programme.
- Participants left the course with a comprehensive knowledge of user interface and user experience design, an awareness of how to utiliseFigma for UI/UX design, and the abilityto develop their own prototypes.

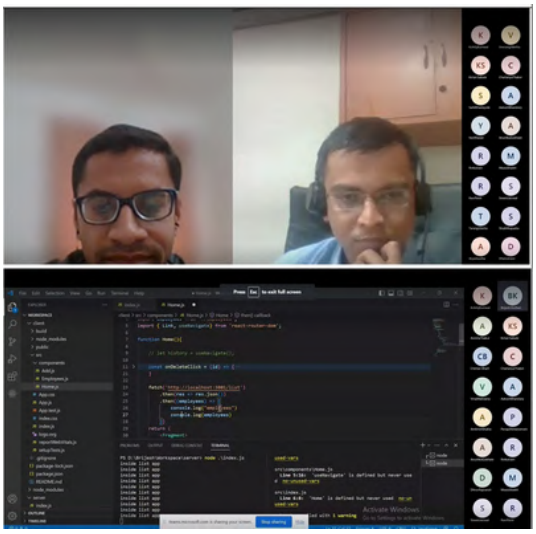
Introduction to Data Science and Cyber Security relevance in current technological scenario

1. **Name of Speaker:** Dr. Amitava Choudhury, Dr. Nishant Doshi
2. **Date of the Event**:20th Feb 2023
3. **Theme of the Event**: PG admission
4. **Description**:-
   - It was organized as a part of admission counseling event for the external aspirants interested to take admission in PG courses at PDEU.

One day workshop on ReactJS

1.**Name of the Speaker:**- Mr. Brijesh Kothari

2.**Date of Event**: - 1st April,2023



Applied Data Science in Stock Market Prediction

1.**Name of Speaker:** Dr. Kinjal Chaudhari(Assistant Professor, Adani University)

2.**Date of the Event** :7/4/2023

3.**Description:**-

- The speaker presented a wholesome overview of how data science can be applied for stock market predictions.
- She gave the details and rationale for each step involved in the process from data gathering, cleaning to predictions with practical. implementations backed with mathematical modelling for the same.

Financial Wellness for Undergraduates

1.**Name of Speaker**:- Mr. Ujjwal Thakar
2.**Date of the Event:**17/4/2023
3.**Description**:-

- The speaker presented the meaning and significance of financial freedom and wellness. In his talk he motivated the audience for investing that might help in the long run.
- His talk involved the basics of stock market investment and dangers, mutual funds and systematic investment plans and how to decide where to invest.

Sub Committee Interviews for CSI-Student Chapter

1.**Event Date**: 13-14-15th of March

2.**Verified By**- Dr. Samir Patel

3.**Description:**-

- This event served as a platform for the club people to hire people and share the idea of CSI student chapter.
- The respective heads of those departments each conducted interviews where they got everyone together to interview them and then walk them through how the club's hierarchy is supposed to work.

Expert talk on transaction management and currency control

1. **Name of the speaker**:Prof. Minal Bhise
2. **Date of the event**:7th April, 2023
3.**Description**:-

- The participants were made understand about Database management system and an expert talk was held on transaction and currency control.

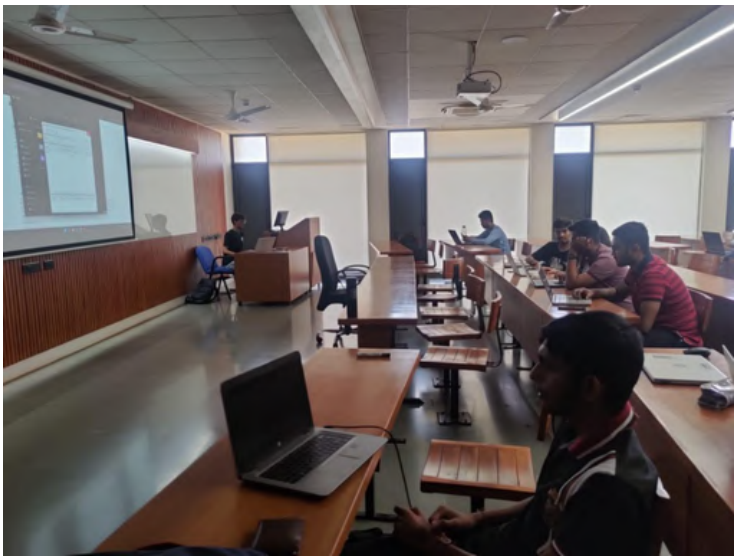
Open GL Workshop

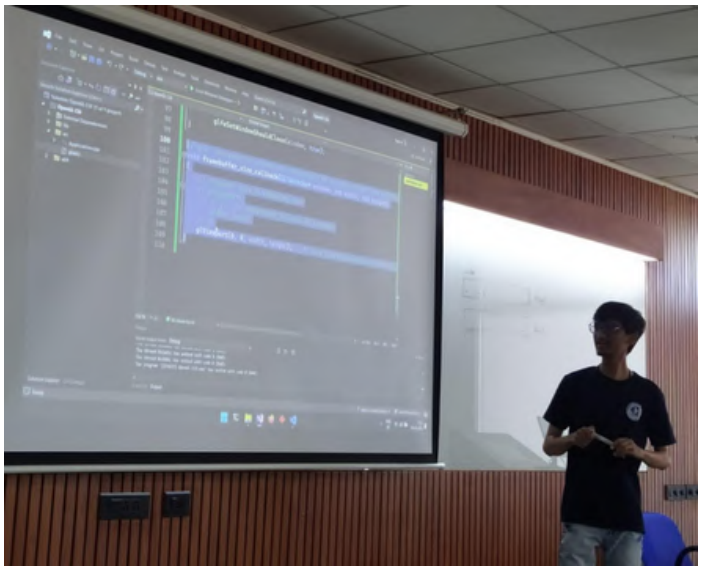
1.**Name of the Speaker:**- Mr.Jay Nakum

2.**Event Date:** 24th of March

3. **Description:**-

- The OpenGL workshop was a hands-on event designed to introduce participants to the basics of graphics programming using the OpenGL API.
- The workshop covered topics such as rendering primitives, applying transformations, working with shades, and handling user input.





Mental and Physical wellness

1. **Name of Speakers**: Mr. Devinder Singh Bhusari, Dr. Sunayna Pandey, Dr. Purvi Patel, Dr. Archana Shah
2. **Date of the Event**: 10th March 2023
3. **Description**

- Our first speaker, Mr. Devinder Singh Bhusari, who embodies heartfulness, spoke after the lamp was lit. Heartfulness is a straightforward and nuanced form of meditation that helps each of us connect with the light and love within of our hearts.He began by discussing the value of happiness in life and how to achieve it. He then gave a fascinating talk about yoga and meditation, as well as the meditation mantra. He then led a 15-minute rigorous meditation session for everyone, which was followed by a strength test.
- Breast cancer and cervical cancer are more common among women, hence Dr. Purvi Patel, consultant-head and neck surgery oncology at HCG Cancer Centre Ahmedabad, gave a lecture on cancer..

Let's Dive into Data Science and Cyber Security: A hands-on Experience

1 **Name of Speakers**: Dr. Shakti Mishra,Dr. Payal Chaudhari

2. **Date of the Event**: 13th March 2023

3. **Description**:-

- In this event Dr. Shakti Mishra discussed data science activities and projects, motivating students to create their own.
- Dr. Payal Chaudhari discussed opportunities for cybersecurity experts, giving a live demo of creating phishing websites and stealing user IDs and passwords.

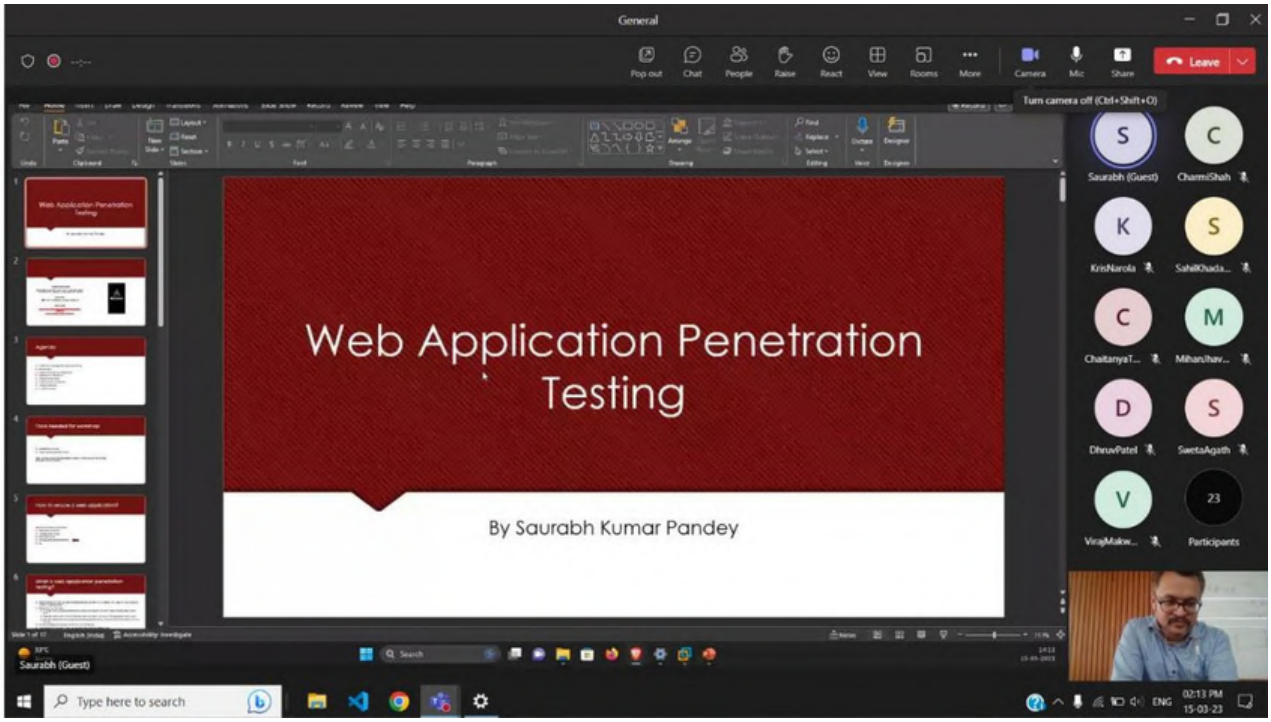
Securing Web Application

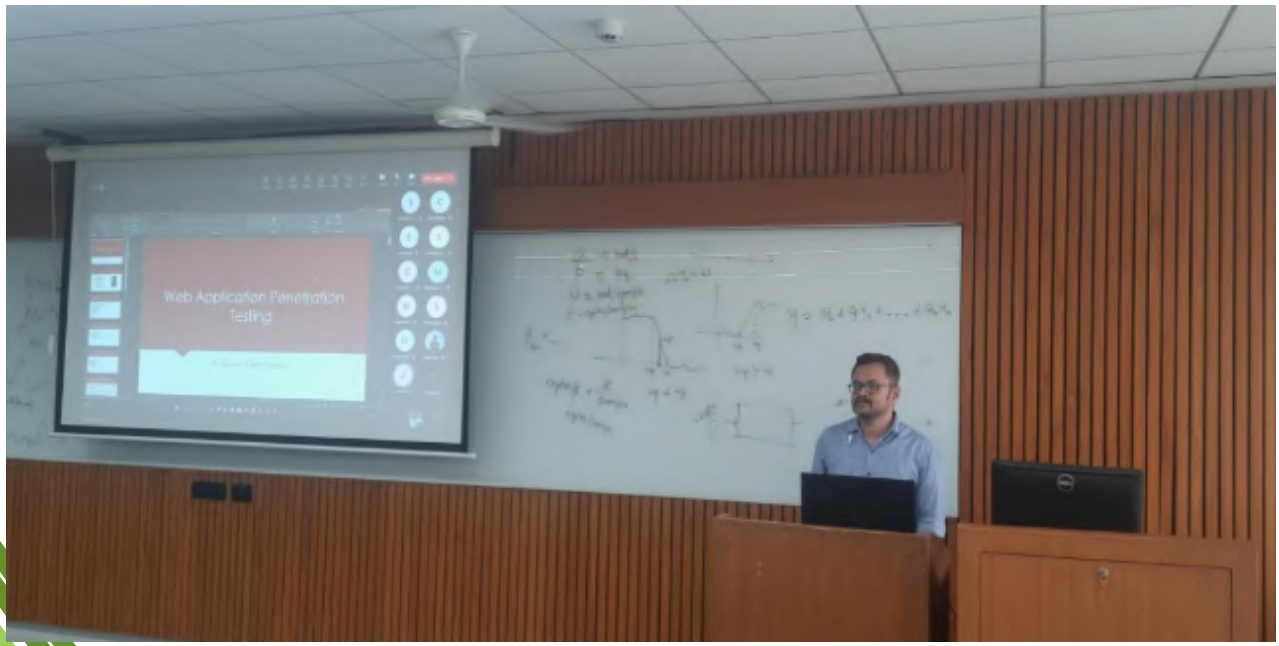
1.**Name of Speaker**:-: SaurabhKumar Pandey

2.**Date of the Event**: 15-03-2023 & 22-03- 2023

3.**Description**:-

- The expert Mr. Saurabh Kumar Pandey sensitized the students about the way penetration testing can be done on the web services.
- There were many activities performed to make the students understand how penetration testing can be done ethically.





Inauguration of ACM-Women Student Chapter

1**.Name of Speaker**: Prof. Rajul Gajjar, Dr. Rutvi Shah, Mrs. Sejal Shah, Dr. Heena Timani, Mrs. Menka Mishra Singh, Mrs. Sheba Priyadarshini Manoharan, Dr. Nita Sinha

2.**Date of the Event**: 24th March,2023

3.**Description**:-

- Department of computer science and engineering and IQAC PDEU inaugurated ACM-Wstudent chapter in the continuation of ACM student chapter and celebrated empowering women with an experttalk on Women in Leadership by Prof.Rajul Gajjar and a Panel Discussion centering around “Women and Work: A balance between family and career” by esteemed panelists.

Microsoft Azure Open Source Day

1.**Name of Speakers**: Hetal Pushpa Mehta, Naisadh Rakesh Patel,Nipun Patel

2.**Date of the Event**: 11/03/2023

3.**Description**:-

- In this event, the participants were made aware about what is cloud & cloud computing along with Microsoft Azure & its working and what services do it offer.
- Also in the event, it was explained how to connect a container & deployment of a docker container in the Microsoft Azure along with getting participants hands-on with Kubernetes.

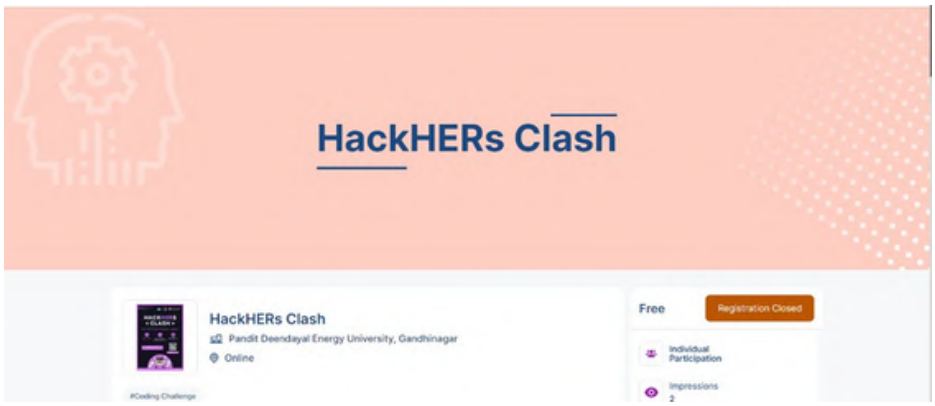
Farewell of UG Students (CSE Batch 2019-23)

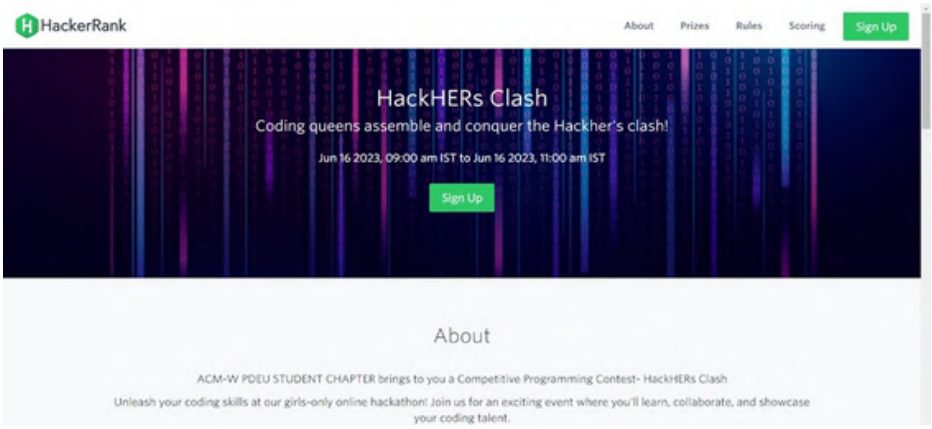
1. **Date of the Event**: 15th May 2023
2. **Department Hosting the Event**: Dept. of Computer Science IQAC, Pandit Deendayal Energy University
3. **Coordinators of the Event**: Dr. Payal Chaudhari, Dr. Rajeev Gupta
4. **Participants**:Students of batch 2019-2023 along with the faculties of department
5. **Theme of the Event:** Cultural Programs
6. **Summary of the Event**:
    - The farewell party has been organized by the dept. of Computer Science and Organization for its final year students of batch 2019-2023 on their last academic day on campus.
    - At 5:30 pm the program began. The students were very exited to attend and to become part of the program. The anchoring was done by Divij Shah and Rajvi Shah, the students of same batch.
    - The farewell was enriched by some musical, singing and dance performance. The students and faculties have shared their experience throughout their academic journey. The program ended with some funny games in a very light environment followed by the dinner.

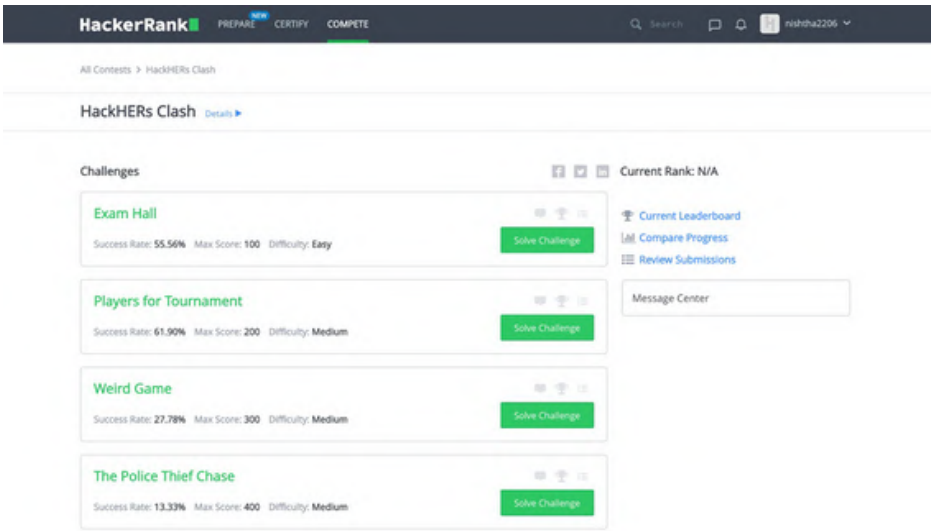
HackHERs Clash 2022-23

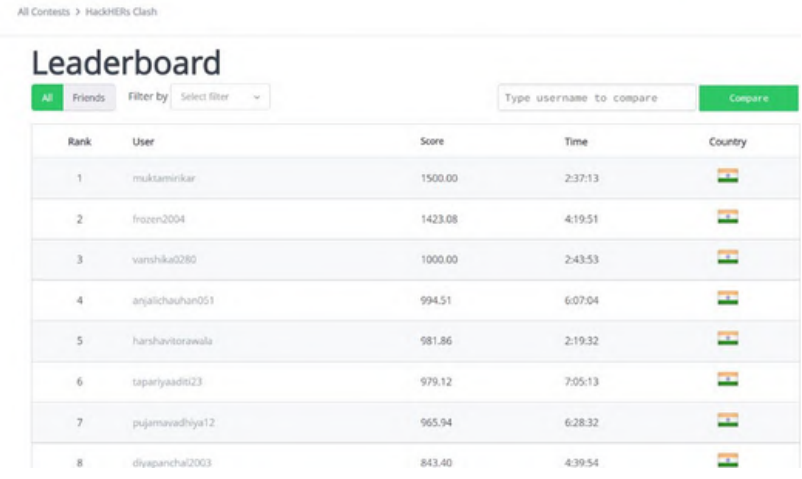
1. **Date of the Event:** 16th June, 2023
2. **Department hosting the Event:** PDEU ACM Student Chapter, Department of Computer Science and Engineering, School of Technology
3. **Coordinator of the Event:** Dr. Shilpa Pandey and Khushali Vaidya, Competitive Coding Head, PDEU ACM Student Chapter.
4. **Theme of the Event:** Girls-only Online Hackathon
5. **Summary of the Event**:

- e-HackHERs Clash 2022-23, a girls-only online hackathon, was organized by the PDEU ACM Student Chapter on June 16th, 2023.
- The event aimed to provide a platform for female participants to showcase their coding skills and encourage their active participation in the field of technology. The event was hosted by the Department of Computer Science and Engineering, School of Technology, and coordinated by Khushali Vaidya, the Competitive Coding Head of the PDEU ACM Student Chapter.
- The hackathon was conducted on HackerRank, an online platform which allowed participants to network, work on coding challenges, and enhance their problem-solving abilities.




HackerRank
About
Prizes
Rules
Scoring
Sign Up
HackHERs Clash
Coding queens assemble and conquer the Hackher's clash!
Jun 16 2023, 09:00 am IST to Jun 16 2023, 11:00 am IST
Sign Up
About
ACM-W PDEU STUDENT CHAPTER brings to you a Competitive Programming Contest- HackHERs Clash
Unleash your coding skills at our girls-only online hackathon! Join us for an exciting event where you'll learn, collaborate, and showcase your coding talent.


HackerRank
PREPARE
CERTIFY
COMPETE
All Contests > HackHERs Clash
HackHERs Clash
Challenges
Current Rank: N/A
Exam Hall
Success Rate: 55.56% Max Score: 100 Difficulty: Easy
Solve Challenge
Players for Tournament
Success Rate: 61.90% Max Score: 200 Difficulty: Medium
Solve Challenge
Weird Game
Success Rate: 27.78% Max Score: 300 Difficulty: Medium
Solve Challenge
The Police Thief Chase
Success Rate: 13.33% Max Score: 400 Difficulty: Medium
Solve Challenge
Current Leaderboard
Compare Progress
Review Submissions
Message Center


All Contests > HackHERs Clash
Leaderboard
All
Friends
Filter by
Type username to compare
Compare
Rank
User
Score
Time
Country
1 muktamirikar 1500.00 2:37:13
2 frozen2004 1423.08 4:19:51
3 vanshika0280 1000.00 2:43:53
4 anjalichauhan051 994.51 6:07:04
5 harshavitorawala 981.86 2:19:32
6 taparlyaaditi23 979.12 7:05:13
7 pujamavadhiya12 965.94 6:28:32
8 divapanchal2003 843.40 4:39:54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Special Highlights

SPECIAL HIGHLIGHTS

The Apple lab inauguration marks a significant milestone for the university. The project, which has been in the works for the past five years, has finally come to fruition with a budget of 1.75 crore. The lab is set to provide students with state-of-the-art technology and equipment, positioning the university as a leader in the field of technology.

The inauguration ceremony was attended by our esteemed Director General, Prof. S. Sunder Manoharan, Prof. Dhaval Pujara, Director of School of Technology, Dr. Shakti Mishra, our Head of the Department, Registrar Col (Dr.) Rakesh Kumar Shrivastawa, and various Deans. Our Director General and Director, SOT emphasized, on the importance of the lab and its potential impact on students' education. The lab is expected to provide students with hands-on experience in developing applications for Apple's platforms, including iOS, macOS, watchOS, and tvOS.

With the Apple lab's inauguration, the university is poised to become a hub for innovation and technology. The lab will provide students with the opportunity to gain practical experience in developing applications for one of the world's most popular tech companies. The university is excited to see the impact that this lab will have on its students and the wider community

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SPECIAL HIGHLIGHTS

CONDOLENCES

On Aug 3rd, 2023 our PDEU CSE Department lost a very bright and promising student Ms. Esha Bavariya due to an unfortunate road accident. Esha was not just an engineering student, she was a beacon of intelligence, determination, and kindness. Her Passion for learning and her dedication to her studies were truly inspiring. She had the potential to make a significant contribution to the world of engineering. Her smile, caring nature and willingness to help others endeared her to everyone she met. Her presence brightened the lives of those around her, and her absence will be deeply felt.

During this difficult time, our thoughts and prayers are with Esha's family and friends. May they find the strength to navigate through this heartbreaking loss. Esha's memory will forever live on in the hearts of those who knew her, and her legacy will continue to inspire us all. As we remember Esha Bavariya, let us also reflect on the fragility of life and the importance of treasuring every moment we have. Rest in peace, dear Esha. You will be dearly missed, but your spirit will always shine bright in our memories.