THE CGPIT TIMES

NEWSLETTER OF CHHOTUBHAI GOPALBHAI PATEL INSTITUTE OF TECHNOLOGY

THE CGPIT TIMES

Glimpse of Various Events (July to September 2024)

Newsletter for Department of Mechanical/ Mechatronics/ Automobile Engineering

Highlights of Events

School visit of Freedom Valley School, Umrakh, Bardoli For "Glimpse of Industrial Automation"

The Department of Mechanical, Automobile, and Mechatronics Engineering organized a school visit for Freedom Valley School, Umrakh, Bardoli on **11th July 2024** to provide a Glimpse about industrial automation. Total 133 students from Freedom Valley School, Umrakh, Bardoli, visited the BOSCH lab at CGPIT, UTU. The visit was organized and coordinated by Mrs. Palak H. Desai Assistant Professor, Mechanical/ Mechatronics/Automobile Engineering Department and Mr. Parth Parmar PRO, UTU. The Faculty Trainer, BOSCH Center of Excellence has conducted sessions for introduction and demonstration of Industrial Automation through Industrial Hydraulic Lab, Industrial Pneumatics Lab, PLC Lab, Sensor Lab, and Mechatronics Lab. Students gained substantial knowledge about industrial automation.

One-day Workshop on "Industrial Automation"

The Department of Mechanical, Automobile, and Mechatronics Engineering at C G Patel Institute of Technology organized a one-day workshop on "Industrial Automation" at the prestigious BOSCH Centre of Excellence on **August 29, 2024**. This workshop aimed to provide students and professionals with a comprehensive understanding of the latest industrial automation technologies, emphasizing hands-on experience with cutting-edge BOSCH equipment. 84 students of Freedom Valley School, Bardoli had participated in the workshop. The Faculty Trainer, BOSCH - Center of Excellence had provided hands on training to the participants, participants gained insights into the workings of BOSCH automation equipment and its integration into manufacturing processes.

An Industrial Visit to BPR Sales & Service, Bardoli

A Field Visit to BPR Sales & Service, Bardoli was organized for Automobile students on **19th September, 2024.** The objective of the visit is to understand the Vehicle HVAC system in Ambulances – their Components and Functions. Faculty member Prof. Hiren Shah had guided 08 students from Automobile engineering during the visit. Students were given an opportunity for Hands on demonstration of Installation, Operation, and Maintenance of critical component.

One-day Workshop on "SolidWorks"

The Department of Mechanical, Automobile, and Mechatronics Engineering, in collaboration with Khodiyar CAD Centre, has organized a hands-on workshop on **SolidWorks** on Friday, **September 6, 2024** at Khodiyar CAD Centre, Surat. From 7th semester of mechanical and Automobile engineering, total 12 students had participated in the workshop, they were accompanied by Prof. Darshan Kapadia, Head of the Department and Prof. Mary Florence; Prof. Jayesh Parekh has Coordinated the event.

Aim of This workshop was to enhance participants' design and modelling skills by providing practical training in 3D part modelling, assembly design, and sheet metal creation using SolidWorks software. Students were benefited from expert-led sessions, gaining valuable industry-relevant insights. The event was designed to foster skill development and improve participants' proficiency in engineering design tools. The workshop focused on key SolidWorks concepts such as 3D part modelling, assembly design, and sheet metal techniques.

Industrial Visit to D H Patel & Associates Pvt Ltd, Surat

A field visit to D H Patel & Associates Pvt. Ltd., Surat, founded by Chartered Engineer Mr. D. H. Patel, on **September 18, 2024** was organized by Mechanical and Automobile Engineering department for final-year B. Tech Mechanical Engineering students. Total 17 students were benefited from the visit, which held significant importance by bridging theoretical knowledge with practical application, offering real-world exposure to Industrial EHS—a crucial aspect of their academic and professional development. Students were provided valuable insights into industrial hygiene, safety, legislation, and accident prevention

The visit was made possible through the efforts of Mr. Hiren R. Patel, a Competent Person at the firm, with Inspection Engineer Mr. Manthan Pathak serving as the main speaker for the event. Dr Hiren Shah has organized and coordinated the event from CGPIT.

One-day Workshop on "Electric Vehicles"

Chhotubhai Gopalbhai Patel Institute of Technology has jointly organized a one-day workshop on "Electric Vehicles" in partnership with the Gujarat Energy Research and Management Institute (GERMI) on **October 1, 2024**. Total 170 participants including students and faculty members from Mechanical, Automobile, Mechatronics and Electrical engineering has attended the workshop. Prof. Parth Parmar, Prof. Naitik Patel and Prof. Darshan Kapadia has coordinated the event. Expert from GERMI, Mr. Manan Pathak, Mr. Shaishavsinh Raj, Mr. Prabhat Mishra had conducted the session on various aspects of Electric Vehicles.

The workshop aimed to provide an in-depth understanding of electric vehicle technologies, including their design, development, comparison of EVs with existing conventional vehicle technology and future potential. With the global shift towards sustainable transportation, the workshop is designed to offer participants exposure to the latest trends, industry practices, and innovations in electric vehicles, equipping them with the knowledge and skills necessary to contribute to the growing EV sector.

Industrial Visit to Expert Engineering Works, Udhna

An industrial visit conducted on **October 11, 2024**, of Expert Engineering Works, proprietor Mr Jignesh Patel, aimed to provide final year Diploma mechanical engineering students with insights knowledge regarding various processes involved in Advanced Machine Technology. The visit was organized for 6 students of diploma Mechanical Engineering and Prof. Naitik D Patel has accompanied and guided them during their visit.

This event held great significance as it bridged theoretical knowledge with practical application, offering students real-world exposure to manufacturing systems, crucial for their academic and professional development. The company is manufacturing different components for L & T Company. They use different non-conventional machines like CNC and VMC.

One-day Workshop on "Industrial Automation"

Maya Tarsadia Industrial Automation Research and Development Centre at C G Patel Institute of Technology organized a one-day workshop on "Industrial Automation" at the prestigious BOSCH Centre of Excellence on **Friday, 04 October 2024**. Total 33 Students of Government Engineering College, Surat was benefited from the workshop. The Faculty Trainer of BOSCH Center of Excellence has provided hands on training in Industrial Hydraulic, Industrial Pneumatics, PLC, Sensor.

This workshop aimed to provide students and professionals with a comprehensive understanding of the latest industrial automation technologies, emphasizing hands-on experience with cutting-edge BOSCH equipment. As industries shift toward automation to enhance productivity and efficiency, it is crucial for engineering students and professionals to stay abreast of these advancements. Through interactive sessions, practical demonstrations, and expert-led discussions, participants explored the applications of automation in modern manufacturing processes. The workshop served as a platform for

bridging the gap between academic learning and industry practices, preparing participants for the evolving industrial landscape.

One-day Workshop on "Industrial Automation"

The Department of Mechanical, Automobile, and Mechatronics Engineering of C G Patel Institute of Technology organized a one-day workshop on "Industrial Automation" at the prestigious BOSCH Centre of Excellence on **October 15, 2024**. 20 students from C K Pithawala College of Engineering and Technology and 19 students from Bhulabhai Vanmalibhai Patel Institute of Technology (Diploma Studies) had attended the hands-on session of workshop. The Faculty Trainer of BOSCH Center of Excellence has provided hands on training in Industrial Hydraulic, Industrial Pneumatics, PLC, Sensor.

This workshop aimed to provide students and professionals with a comprehensive understanding of the latest industrial automation technologies, emphasizing hands-on experience with cutting-edge BOSCH equipment. Through interactive sessions, practical demonstrations, and expert-led discussions, participants explored the applications of automation in modern manufacturing processes. The workshop served as a platform for bridging the gap between academic learning and industry practices, preparing participants for the evolving industrial landscape.

One-day Workshop on "Industrial Automation"

The Department of Mechanical, Automobile, and Mechatronics Engineering at C G Patel Institute of Technology organized a one-day workshop on "Industrial Automation" at the prestigious BOSCH Centre of Excellence on **October 16, 2024**. Total 21 students from B.E Mechanical Engineering, SCET, Surat had attended the hands-on session of workshop. The Faculty Trainer of BOSCH Center of Excellence has provided hands on training in Industrial Hydraulic, Industrial Pneumatics, PLC, Sensor.

This workshop aimed to provide students and professionals with a comprehensive understanding of the latest industrial automation technologies, emphasizing hands-on experience with cutting-edge BOSCH equipment. Through interactive sessions, practical demonstrations, and expert-led discussions, participants explored the applications of automation in modern manufacturing processes. The workshop served as a platform for bridging the gap between academic learning and industry practices, preparing participants for the evolving industrial landscape.

Placement of Pass out Batch 2023-24

Sr No	Name	Branch	Recruiter Company
1	Dhruv Tatkare	Mechanical	Facets Gems polishing works private limited
2	Nishil Shah	Mechanical	Facets Gems polishing works private limited
3	Sahil Jogi	Mechanical	D B Engineers
4	Aditya Parekh	Mechanical	Waaree Energies Limited
5	Dhir Desai	Mechanical	Waaree Energies Limited
6	Smit Prajapati	Mechanical	Waaree Energies Limited

Newsletter for Department of Civil Engineering

Achievement by Students and Glimpse of Events

Highlights of Events

One-Day Workshop titled "AutoCAD and Revit Architecture"

The Department of Civil Engineering hosted a single-day workshop on 15-07-2024 titled "AutoCAD and Revit Architecture" aimed at B. Tech students. Renowned experts, namely Mr. Savan Hirapara, and Ms. Jaivisha Patel, from Khodiyar CAD Center Pvt. Ltd in Surat were the guest speakers at this seminar. The event saw active participation from a total of 29 students. During the workshop, students got the opportunity to learn from industry experts about the latest trends and advancements in AutoCAD 2D and Revit Architecture. They engaged in interactive sessions and practical exercises which enhanced their understanding and skills. They gained a certificate of participation which added value to their academic and professional journey.

Expert Lecture on "Career Opportunities after Civil Engineering in Government and Private sector"

A career counselling for B.Tech final year students has been organized on 17th July, 2024 in which prime focus was to discuss and array the students for carrier opportunities after diploma or degree was discussed. Main Session was conducted by Mr. Mukesh Rai Sir. He is Chief Mentor for Engineering students having 9+ years of Experience in teaching Engineering Students. He has educational background of BE (Civil Engineering), M.Tech in Civil (Structural Engineering).He has helped 2000+ students to unlock their potential with GATE and GPSC and helped them to reach Top IITs , premium PSUs/Private sector units and other government departments. Passionate for teaching & effective mentoring of students are his major skills. He talked about importance of clearing GATE examination during their B.E/B.Tech Programme and also discussed about GPSC examinations.

Expert Lecture on "Introduction to IPR"

An introductory session on Intellectual Property Rights (IPR) was organized by the Department of Civil Engineering for first-year B.Tech students on 11th September 2024. The session aimed to raise awareness about the importance of intellectual property in the field of engineering and technology. The students were introduced to various forms of IPR, including patents, copyrights, trademarks, and trade secrets, along with their relevance in innovation, research, and development. The speaker also highlighted the significance of protecting one's intellectual creations and the legal frameworks that govern IPR in India and globally. The session was interactive and informative, providing the students with a foundational understanding of how IPR impacts their academic and professional careers.

Site visit to Bardoli Railway Station

Department of civil engineering students visited Bardoli Railway station on 19-09-2024. The purpose of the technical site visit to the Bardoli railway station was to observe and analyze the key infrastructure elements and operational systems of the station. The visit aimed to gain practical insights into railway engineering, covering various aspects such as track components, safety systems, and drainage structures, which are vital for the efficient functioning of railway services. The technical site visit to the railway station provided valuable insights into the functioning and maintenance of railway infrastructure. Overall, the station was well-maintained, with efficient systems in place for drainage, signalling, safety, and erosion control.

Lab visit at SVNIT Geotechnical and Geo environmental Engineering

Department of civil engineering students visited laboratory of SVNIT on 20-09-2024. During the lab visit to the Department of Geotechnical and Geoenvironmental Engineering at SVNIT, the students had the opportunity to explore various experimental setups and procedures related to soil mechanics, foundation engineering, and environmental geotechnics. The lab showcased a wide range of advanced equipment, including devices for soil compaction, shear testing, consolidation, and permeability tests. Additionally, the lab emphasized the importance of conducting accurate soil analysis to assess both geotechnical properties and environmental concerns, such as contamination and waste management. The visit provided valuable hands-on experience in

understanding how theoretical concepts are applied to real-world geotechnical and geoenvironmental challenges.

Visit to Pramukh Testing Laboratory for Civil Engineering Students

On 27/09/2024, the students of 3rd year from the Civil Engineering Department of CGPIT visited Pramukh Testing Laboratory as part of their educational curriculum. The primary aim of the visit was to provide students with practical exposure to advanced material testing methods and to bridge the gap between theoretical knowledge and real-world application. Pramukh Testing Laboratory is an NABL (National Accreditation Board for Testing and Calibration Laboratories) accredited facility that specializes in testing various construction materials.

The laboratory is equipped with state-of-the-art machines and technologies that are widely used in quality control and research for civil engineering projects. The visit to Pramukh Testing Laboratory was a highly educational and insightful experience for the students. It provided them with valuable exposure to various material testing techniques and equipment, which are essential for ensuring the quality of construction projects. The students left with a greater appreciation for the importance of material testing in civil engineering practice and a better understanding of the standards and procedures involved.

Vibration Testing of Pedestrian Bridge at Workshop in CGPIT

The 7th-semester B.Tech. Civil Engineering students of CGPIT, UTU Maliba Campus conducted a hands-on technical session on vibration testing of the pedestrian walkway adjacent to the Mechanical Workshop. The objective of this event was to provide the students with practical exposure to vibration analysis and its significance in structural engineering. The event allowed students to experience how real-time vibration data is collected and analyzed to assess the dynamic behavior of structures subjected to different loads. The vibration analysis report for the testing of the pedestrian walkway at Mechanical Workshop in UTU Maliba Campus, conducted on 27th September 2024 during the visit of certified experts. Abnormal vibration levels were consistently recorded during walking, running, crowd, and jumping conditions, indicating that the platform struggles to maintain structural integrity under dynamic loads.

For each condition, vibration readings (velocity, displacement, and acceleration) were recorded at multiple points. Graphical representations for each test point provided visual insight into horizontal and vertical velocity, displacement, and acceleration trends.

Students Achievement

On 13th September 2024, second-year Civil Engineering students secured the 2nd rank in the "Tensile Tycoon" event at Techfest SCICLONE. The competition, which challenged participants to design and construct a tensile structure using limited materials, tested their creativity, engineering skills, and problem-solving abilities. The team's innovative approach and effective execution of their design earned them recognition for both technical proficiency and teamwork. Their success in this prestigious event not only highlighted their practical understanding of civil engineering concepts but also demonstrated their capability to apply theoretical knowledge in real-world scenarios.

Placements Batch 2024

Sr. No	Academic Year	Name of the Company	No of students recruited	Minimum salary Offered per Annum
1	2023-24	ALECK STRUCTURAL ENGG	3	1,08,000/-
2	2023-24	REAL VALUE CONSULTING SERVICES	1	1,20,000/-

Our Leading Recruiters

Newsletter for Department of Electronics and Communication / Information and Communication Technology / Electrical Engineering
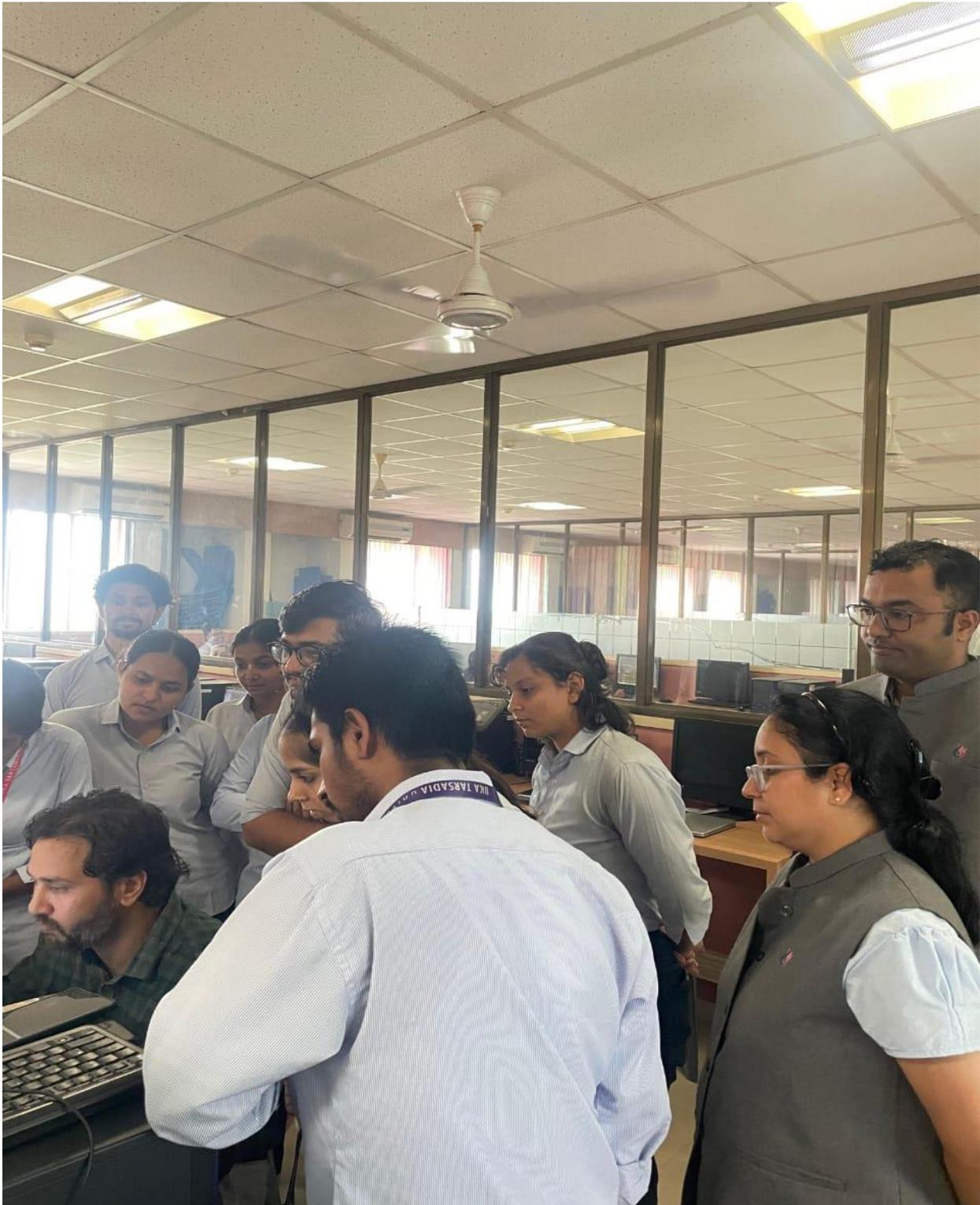
Workshop on "VLSI Design Technology"

The workshop on the "VLSI Design Technology" was conducted for the students of the Department of Electronics & Communication Engineering and Information and Communication Technology, CGPIT at Uka Tarsadia University on 23rd September 2024. The main objective of the one-day hands on workshop on "VLSI Design Technology" is to make EC and ICT Engineering students familiar with the latest and advanced software tools available for simulation and design implementation, to provide students a more practical approach, practical implementation of theoretical concepts and fundamentals into the field of VLSI design work, and also to make them prepare for industrial requirements and industry-based projects Workshop: VLSI Design Technology. This interactive workshop covered:

➢ Fundamental concept of VLSI Design technology.

➢ VLSI based schematic design and time analysis.

➢ VLSI based layout design and time analysis.

➢ Various VLSI tools for the VLSI backend design.

Inaugural Session of the Workshop

Expert showing demonstration and students learning doing hands on practice during the session

Seminar on Empowering Minds with AI

A journey into the future organized by Department of EC, ICT, EE, IT, CE, AI&DS, Uka Tarsadia University The seminar on the "Empowering minds with AI: A journey into the future" was conducted for the students of the Department of Electronics and Communication, Information and Communication Technology, Electrical, Information Technology, Computer Engineering, Artificial Intelligence & Data Science students, CGPIT at Uka Tarsadia University on 05th September 2024. The primary objective of the seminar is to Educate participants about the foundational concepts and advancements in Artificial Intelligence (AI) and its interdisciplinary impact across various fields like electronics, communication, computing, and data science. Inspire innovation and research in AI and related domains by showcasing recent advancements, tools, and techniques, encouraging participants to engage with the cutting-edge developments in AI.

This interactive seminar covered:

➢ Introduction to AI and Its Applications

➢ Emerging Trends in AI

➢ AI in Engineering and Technology

➢ Interdisciplinary Impact of AI Ethical and Social Implications of AI

➢ AI Research and Future Prospects

By the end of the seminar, students were able to:

➢ Enhanced Knowledge of AI Technologies

➢ Increased Awareness of AI's Societal Impact

➢ Skill Development and Research Opportunities

➢ Fostering Collaboration and Networking

➢ Inspiration for Innovation and Career Growth

➢ Actionable Insights for Future AI Integration

Glimpse of Seminar Empowering Minds with AI

Seminar on Interview Etiquette

The seminar on the "Interview Etiquette" placement training program was conducted for the students of the Department of Electronics and Communication Engineering & Information and Communication Technology, CGPIT at Uka Tarsadia University on 09/07/2024. The primary objective of the seminar is to equip students from the Department of Electronics and Communication (EC) & Information and Communication Technology (ICT) at Uka Tarsadia University with essential knowledge and practical skills for facing interview with etiquette in their future placement drive. This seminar aims to enhance their employability by providing them knowledge about interview etiquette with providing practical explanation with fun activities. Interview etiquette refers to the customary code of polite behavior and effective communication

during a job interview. Proper etiquette can significantly influence the outcome of an interview, showcasing the candidate's professionalism, respect, and suitability for the position.

This interactive seminar covered:

Preparation: Research the company, Personal presentation, Materials to bring. During the interview: Arrival, Communication skills, Professionalism, Questions to ask Post-Interview Etiquette: Follow-Up, Reflect and Improve Outcomes.

By the end of the seminar, students were able to:

1. Enhanced Understanding of Professional Behavior

2. Improved Communication Skills

3. Increased Confidence

4. Better Preparation Techniques

5. Understanding the Importance of Follow-Up

6. Professional Networking Skills

7. Practical Application

8. Long-Term Career Benefits

Students and Faculty Members during the session

Expert having interaction with the students

Industrial Visit to Balaji Wafers Pvt. Limited, Valsad

Students of B.Tech Electronics and Communication and Information and Communication Technology visited Balaji Wafers Pvt. Limited, Valsad on 25th September 2024. Total 37 students visited the industry and they got insights about various plants operated by the company.

Students, Faculty Members and Industry Staff at Balaji Wafers Pvt. Limited Plant

Group Photograph of Students and Faculty Members at the Plant

One Day Hands on Workshop on Domestic Wiring

On 2nd August 2024, CGPIT (Chhotubhai Gopalbhai Patel Institute of Technology) hosted a Hands-On Workshop on Domestic Wiring, led by Mr. Snehal Patel, an experienced electrical engineer. The workshop was designed to provide students with practical knowledge and skills related to domestic electrical systems, bridging the gap between theoretical education and practical application. Workshop Activities: The workshop commenced with a thorough introduction to the principles of domestic wiring. Mr. Snehal Patel provided a detailed overview of electrical concepts, including the functions of various components such as wires, switches, sockets, and circuit breakers. This theoretical foundation was vital for understanding the practical tasks that followed. Participants were introduced to essential electrical safety standards and regulations, which set the stage for the hands-on activities. In the practical segment, students were actively involved in installing switches, sockets, and light fixtures, guided by Mr. Snehal Patel. They assembled basic electrical circuits and learned to troubleshoot common wiring issues. This hands-on experience was designed to bridge the gap between theory and real-world application, allowing students to apply their knowledge in a controlled, supervised environment. Mr. Patel's guidance ensured that participants understood the correct procedures and techniques, enhancing their confidence and competence in domestic wiring.

Director, CGPIT delivering inaugural address of the workshop

Students performing hands on practice during the workshop

Industrial Visit at GETCO Mota Substation-Mota, Bardoli

Details of the Industrial Visit: Industry Profile On behalf of entire Electrical Engineering Department we thank Chief Engineer GETCO for giving an opportunity to visit the substation and control room. Our main purpose for this visit is to be familiar with industrial environment and to get practical knowledge of electrical power transmission and distribution Gujarat Energy Transmission Corporation Limited (GETCO) was set up in May 1999 and is registered under the Companies Act, 1956. Gujarat Energy Transmission Corporation Limited (GETCO) The Government of Gujarat unbundled and restructured the Gujarat Electricity Board with effect from 1st April 2005. The Generation, Transmission and Distribution businesses of the erstwhile Gujarat Electricity Board were transferred to seven successor companies. The industrial visit was held on 18th September 2024.

The seven successor companies are listed below:

i)   Gujarat State Electricity Corporation Limited (GSECL) - A Generation Company

ii)   Gujarat Energy Transmission Corporation Limited (GETCO) - A Transmission Company Four Distribution Companies:

iii)   Dakshin Gujarat Vij Company Limited (DGVCL)

iv)   Madhya Gujarat Vij Company Limited (MGVCL)

v)   Uttar Gujarat Vij Company Limited (UGVCL)

vi)   Paschim Gujarat Vij Company Limited (PGVCL);

vii) Gujarat Urja Vikas Nigam Limited (GUVNL) – A Holding Company and is also responsible for purchase of electricity from various sources and supply to Distribution Companies.

The Company was promoted by erstwhile Gujarat Electricity Board (GEB) as its wholly owned subsidiary in the context of liberalization and as a part of efforts towards restructuring of the Power Sector. The company is now a subsidiary of Gujarat Urja Vikas Nigam, the successor company to the GEB. Before entering into switch yard field engineer gave safety instruction to the students because any misbehave might result in life threatening risk. One of the engineer explained all the essential component of the 66KV substation and explained one line diagram of MOTA Substation. In addition they explained about SCADA (Supervisory Control and Data Acquisition) and various programming done in control room. Students have visited following places at the site.

1. Control Room

2. Control Panel

3. Relay Panel

4. Metering Panel

5. Battery sets

2) Switch yard

• Lightening Arrester

• CT & PT

• Wave trap

• Circuit Breaker

• Isolators

• Earthing switch

• Power Transformers

• Capacitor bank

• Circuit Breaker

After completion of the visit the students have got the idea about,

• Knowledge of different types Circuit breaker and Relay Substation.

• Operation sequence of different switch gears in Power transmission system.

- Different types of Protective Schemes used in Power system.

- Knowledge about SCADA and microprocessor relay for protection.

Students, Faculty Members and Trainee at Site

Students are being trained at the site by the trainer

Group Photograph of Students along with Faculty Member at the Site

Newsletter for Department of Computer Engineering

An interactive online expert talk on "Advancements in Post Quantum Cryptography"

Advancements in post-quantum cryptography are rapidly evolving as researchers work to develop encryption methods resistant to the potential threats posed by quantum computers. Quantum computers have the capability to break widely-used cryptographic systems, such as RSA and ECC, which are foundational to modern cybersecurity.

In response, the field of post-quantum cryptography is exploring algorithms based on lattice problems, hash functions, and coding theory, which are believed to be secure against quantum attacks.

Recent progress includes the ongoing standardization efforts by organizations like NIST, which are evaluating and selecting robust algorithms for future-proof security. These advancements aim to ensure that our digital communications and data remain secure in an era where quantum technology becomes more prevalent.

The expert talk was organized on 10th September 2024. Dr. Sarada Prasad Gochhayat Assistant Professor, Department of Computer Science & Engineering, Indian Institute of Technology (IIT) Jammu was invited to deliver online expert talk on Advancements in Post Quantum Cryptography.

Total 200 students participated in this expert session.

छोटुभाई गोपालभाई पटेल प्रौद्योगिकी संस्थान, बारडोली
Chhotubhai Gopalbhai Patel Institute of Technology, Bardoli
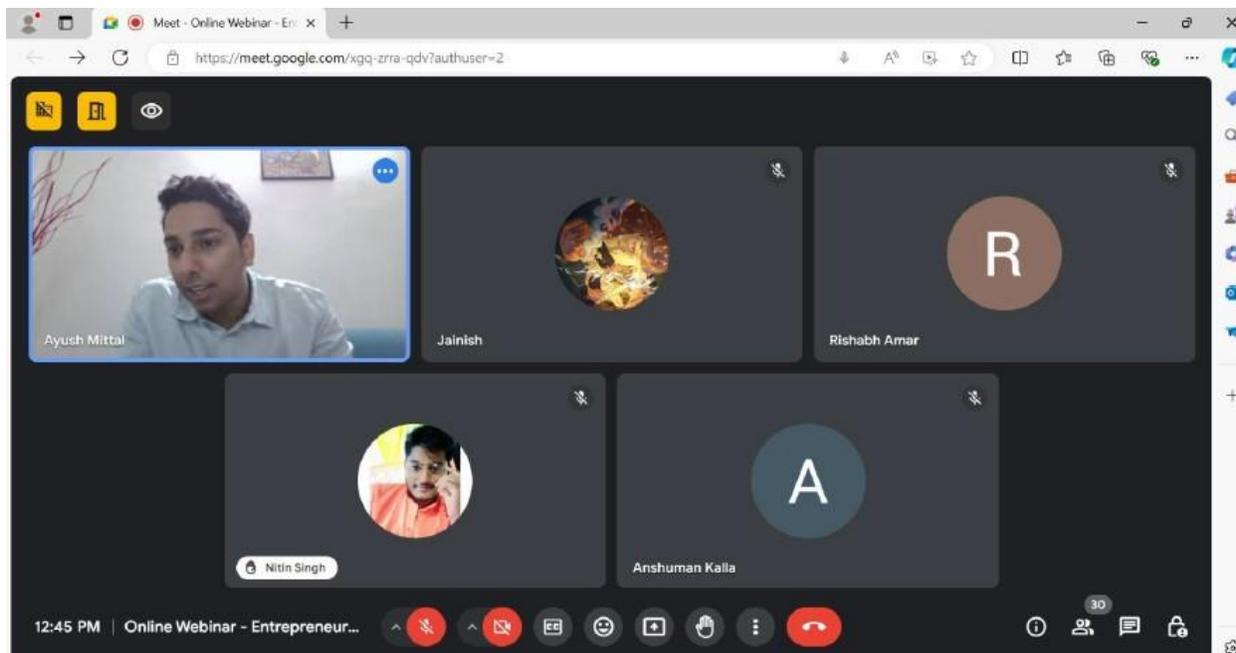
Students attending expert session

Moderators at online expert session

Online Webinar on "Entrepreneurship & New Venture Creation"

Department of CE & AIDS and IT & CS witnessed a wonderful online webinar on Entrepreneurship & New Venture Creation. The speaker of the session was Mr. Ayush Mittal, Co-Founder & M.D., PhonePro Electronics, New Delhi, India. He is B.Tech from Manipal University Jaipur and MBA graduate from Indian Institute of Management (IIM) – Kozhikode. His company is one of the largest vendors of amazon, and the sole liquidation vendors of Xiaomi and TCL for entire India.

Mr. Ayush Mittal has discussed the essentials of turning ideas into successful businesses. Some of the interesting topics discussed during the webinar were framework for new venture creation, five forces of competition model, and different aspects of entrepreneurial mindset. The best part was last half an hour where there were series of wonderful questions from our students, which were fantastically answered by Mr. Ayush Mittal. The webinar was conducted on 10th August 2024.

Total 40 students participated in the interactive session, and gained insights on how to kick-start an entrepreneurial journey.

Glimpse of online webinar

One-day Workshop on "End-to-End Machine Learning: Mastering Each Phase of Your Project"

Department of Computer Engineering and Artificial Intelligence & Data Science, CGPIT has organized a one-day workshop on 28th September 2024 titled "End-to-End Machine Learning: Mastering Each Phase of Your Project". The workshop was attended by 26 students of B.Tech. CE/IT/AI&DS and 5 faculty members.

Hands-on machine learning is vital because it bridges the gap between theory and real-world application, enabling learners to apply concepts to actual problems. This practical experience fosters essential skills like coding, data manipulation, and critical thinking, while also promoting familiarity with popular tools and frameworks. Engaging in real projects enhances problem-solving abilities, encourages creativity, and allows participants to build a demonstrable portfolio, showcasing their expertise to potential employers. Additionally, it cultivates teamwork and communication skills, keeps practitioners updated on industry trends, and boosts confidence, empowering them to tackle more complex challenges in the ever-evolving field of machine learning. The workshop was filled with knowledge, collaboration, and inspiration.

Following points were covered in the workshop:
1. Introduction to Machine Learning: Overview of machine learning concepts and terminology. Discussion of the different types of machine learning: supervised, unsupervised, and reinforcement learning.

2. Problem Definition: Identifying and defining a clear problem statement. Understanding project requirements and success criteria.

3. Data Collection and Preparation: Techniques for data gathering: APIs, web scraping, and datasets. Data cleaning and preprocessing: handling missing values, outliers, and feature engineering.

4. Exploratory Data Analysis (EDA): Visualization techniques to understand data distribution and relationships. Using statistical methods to draw insights and inform modeling decisions.

5. Model Selection and Training: Introduction to various machine learning algorithms: regression, classification, clustering, and more. Hands-on implementation using popular libraries like Scikit-learn and TensorFlow. Hyperparameter tuning and model evaluation techniques (cross-validation, metrics).

6. Model Deployment: Best practices for deploying machine learning models into production. Introduction to cloud services and containerization (Docker, Kubernetes). Monitoring and maintaining models post-deployment.

Students attending the workshop

Students attending the workshop

An Industrial Visit at "NJ Technologies, Surat"

On 27th September 2024 students from Chhotubhai Gopalbhai Patel Institute of Technology (5th Semester Computer and AI&DS) had the opportunity to visit NJ Technologies located at Udhna, Surat - 394210, Gujarat. NJ Technologies is a part of the NJ Group and aims to provide quality technology solutions to businesses across various domains. The visit provided students with insights into the company's operations, technologies, and working environment.

Company Profile:

NJ Technologies is a venture of the NJ Group, established to deliver technology solutions to businesses. The journey began with Finlogic Technologies (India) Private Limited in 2002, focusing on software applications to support financial services distribution and IT infrastructure management. Over the years, the IT team at NJ Group has developed strong domain expertise in diverse areas and technology domains. With over 270 employees skilled in product development, software testing,

infrastructure management, project management, and information security, NJ Technologies is well-equipped to address business challenges. The company emphasizes adopting the latest industry practices to deliver effective solutions.

Visit Highlights:

During the visit, students had the opportunity to learn about NJ Technologies' core areas of expertise, including testing, development, cyber security, database administration, and full stack development. They gained insights into the company's proprietary applications developed by the Finlogic team, which power many of NJ Group's businesses and activities. Students also observed the company's commitment to leveraging in-house skills and expertise to provide tailored solutions to clients.

Conclusion:

The industrial visit to NJ Technologies provided students with valuable exposure to real-world technology solutions and industry practices. They gained insights into the company's operations and the diverse roles within the technology domain. The visit enhanced their understanding of the application of technology in business contexts and provided inspiration for their future careers. We extend our gratitude to NJ Technologies for hosting an informative and enriching visit.

Industry Premises

Group Photograph of Students and Faculty Members at Industry Premises

Trainer delivering talk to the students at industry

An Industrial Visit to "Rishabh Software (MNC), Vadodara"

On September 23, 2024, 5th and 7th semester students from the Department of CE and AI&DS, Chhotubhai Gopalbhai Patel Institute of Technology visited Rishabh Software at Plot 66, Beside Sigil India, Padra Road, Atladra, Vadodara 390012, Gujarat, India. Total 54 students along with three faculty members Mr. Taral Contractor, Mr. Viral Panchal and Ms. Manali Modi participated in the industrial visit. The company focuses on delivering quality technology solutions across various domains. The visit offered students valuable insights into the company's operations, technologies, and work environment.

Company Profile:
Rishabh Software is a full-service software development company with 2 decades of experience & a strong focus on digital capabilities such as cloud, analytics, IoT, low-code &

more. It offer technology consulting services to mid-size companies & enterprises looking to transform their businesses digitally. Their software product engineering services enable the creation of next-gen digital products. Their talented workforce of 1000+ individuals has served customers across 25+ countries including the US, UK, Europe, Canada, Singapore & Australia.

Visit Highlights:

During your industrial visit, Mr. Ketan Rathod, a Technical Trainer, gave an extensive briefing on several cutting-edge technology fields such as DevOps, Business Analytics, Data Science, Cloud Engineering, IoT, and more. He also discussed the history of Rishabh Software, highlighting its growth and evolution over the years. The company is actively engaged in various fields such as software development, mobile app development, cloud solutions, and data engineering. Mr. Rathod also touched on Rishabh's awards and recognitions for excellence in technology and innovation, as well as their collaborations with numerous global partners, showcasing the company's strong reputation in the tech industry.

Mr. Rathod provided brief information on the following fields of Computer Engineering:

- DevOps
- Business Analytics
- Automation Development
- Data Analytics
- Data Science
- Data Engineering
- Cloud Engineering
- Full Stack Engineering
- Test Engineering
- Mobile Apps Development
- Digital Experience
- IoT Engineering

Group Photograph at Industry Premises

Students attending interactive session at industry

Newsletter for Department of Information Technology

Highlights of Events

One-Day Workshop titled "Master Big Data Hands On Practice with Mondo DB"

The Department of Information Technology hosted a single-day workshop on 01-10-2024 titled "Master Big Data: Hands on Practice with MongoDB" aimed at B. Tech students. Renowned experts, namely Ms. Niyanta Desai, from SSM Infotech in Surat were the guest speakers at this seminar. The event saw active participation from a total of 200 students. During the workshop, students got the opportunity to learn from industry experts about the MongoDB. They engaged in interactive sessions and practical exercises which enhanced their understanding and skills. They gained a certificate of participation which added value to their academic and professional journey.

Students performing hands on practice

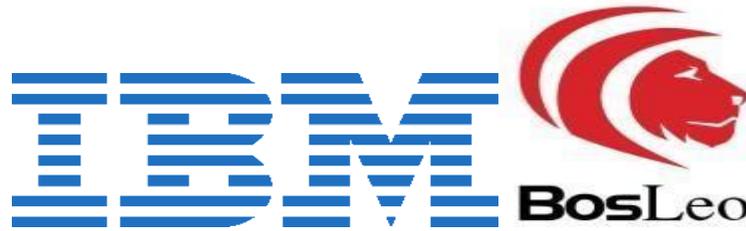Group Photograph of Students, Faculty Members and Director, CGPIT

Students Achievement

On 13th September 2024, second-year Information Technology students secured the winning Price in the "Fastest Coder First" event at Techfest SCICLONE. The competition, which challenged participants to design and implement Java, C++, C Programming Skill and problem-solving abilities.Their success in this prestigious event not only highlighted their practical understanding of Software Engineering concept but also demonstrated their capability to apply theoretical knowledge in real-world scenarios.

Photograph of Students (Achievers)

THE CGPIT TIMES

छोटुभाई गोपालभाई पटेल प्रौद्योगिकी संस्थान, बारडोली
Chhotubhai Gopalbhai Patel Institute of Technology, Bardoli

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Newsletter for Department of Chemical Engineering

Highlights of Events

Expert Lecture on "Career Opportunities in Chemical Engineering in Government and Private sector"

A career counselling for B. Tech final and pre-final year students has been organized on 17th July, 2024 in which prime focus was to discuss and array the students for carrier opportunities after diploma or degree was discussed. Main Session was conducted by Mr. Mahesh Malusare Sir. He is Chief Mentor for Engineering students having 12+ years of Experience in teaching Engineering Students. He has educational background of BE (Chemical Engineering), M. Tech in Civil (Structural Engineering). He has helped 2000+ students to unlock their potential with GATE and helped them to reach Top IITs, premium PSUs /Private sector units and other government departments. Passionate for teaching & effective mentoring of students are his major skills. He talked about importance of clearing GATE examination during their B.E/B.Tech Programme and also discussed about GPSC examinations.

Interaction of expert with the students

Interaction of expert with the students

(CGPIT - Engineers' Day celebration)

13th September, 2024

Programme Outline:

SciClone 2K24, the annual techfest of Chhotubhai Gopalbhai Patel Institute of Technology (CGPIT) at Uka Tarsadia University, held on September 13, 2024, was a grand celebration of engineering and innovation. Coinciding with Engineer's Day, this event aimed to bring together students from diverse engineering fields to showcase their technical prowess, creativity, and teamwork through a series of competitive events, workshops, and exhibitions.

The techfest featured a wide range of events spanning various disciplines, encouraging students to apply their theoretical knowledge to practical challenges. Competitions were designed to promote problem-solving, coding skills, engineering design, and sustainability, among other critical areas.

The core organizing committee for SciClone 2K24 included dedicated faculty members from multiple engineering departments, ensuring smooth coordination and successful execution. The main objective of this celebration was to encourage the students' expertise and creativity in the field of engineering.

Highlights of the various events: (Sciclone 2K24)

Key Events:

> - **InnoSprint** – A platform for innovative solutions in tech (Computer & AI&DS).
> - **Code Clash Triad** – A coding contest for sharp programming minds (Computer & AI&DS).
> - **DigiCanvas: Hoard & Frame** – A digital art competition (Computer & AI&DS).
> - **Fastest Coder Fir**st – A speed coding challenge (IT & CS).
> - **Artifice Web** – A web development contest (IT & CS).
> - **Techvision Reel** – A creative short video competition (IT & CS).
> - **Electromaze** – An event focused on circuit design and electronics (EC & ICT).
> - **Energenius** – An energy-based problem-solving event (Electrical).

- ➢ **Idea to Reality** – Engineering project showcase (Mechanical/ Mechatronics/ Automobile).
- ➢ **Recycle Ranger** – A sustainability-themed challenge (Mechanical/ Mechatronics/ Automobile).
- ➢ **Paper Plane** – Design competition for aerodynamics enthusiasts (Mechanical/ Mechatronics/ Automobile).
- ➢ **Tiny Terrarium** – Civil engineering competition on landscape design (Civil).
- ➢ **Tensile Tycoon** – A challenge in structural engineering (Civil).
- ➢ **Building a Digital Second Brain-** Introduction to the second brain concept, Capture stage, organize stage, Distil stage, Express stage.

Objectives:

- ➢ Skill Development: Enhance technical and creative skills through practical tasks.
- ➢ Interdisciplinary Collaboration: Foster teamwork across different branches of engineering.
- ➢ Innovation: Encourage students to come up with innovative solutions to real-world problems.
- ➢ Professional Growth: Provide a platform for students to present their work, preparing them for industry challenges.

Impact on Students:

SciClone 2K24 was more than just a competitive platform. It offered students:

- ➢ **Hands-on Experience**: By solving real-world challenges, students gained practical skills and knowledge that went beyond theoretical understanding.

- ➢ **Innovation Encouragement**: The emphasis on innovation pushed participants to think out of the box and develop creative solutions to complex problems.

- ➢ **Teamwork and Leadership**: Most events required participants to work in teams, promoting collaboration and leadership among peers.

- ➢ **Networking**: The techfest provided a unique opportunity for students to interact with faculty, peers from other departments, and industry professionals, fostering a collaborative learning environment.

- ➢ **Recognition**: Winners of the various events were celebrated, earning recognition for their skills, and contributing to their professional development.

Overall Outcome:

The tech-fest concluded with a celebration of the participants' achievements, reinforcing CGPIT's commitment to fostering a culture of innovation, technical excellence, and interdisciplinary learning. The event, directed under the leadership of Prof. B. M. Vadher, Director of CGPIT, demonstrated the institute's efforts in bridging the gap between academic knowledge and industry expectations.

SciClone 2K24 left a lasting impact on its participants, motivating them to pursue innovation-driven careers and contribute to the engineering community with confidence and creativity. The event successfully highlighted the importance of technology in shaping the future, making it a signature celebration of engineering excellence at CGPIT.

Glimpse of SciClone 2K24

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Internal Hackathon for Smart India Hackathon –2024

About the event:

Smart India Hackathon (SIH) is a premier nationwide initiative designed to engage students in solving some of the most pressing challenges faced in everyday life. Launched to foster a culture of innovation and practical problem-solving, SIH provides a dynamic platform for students to develop and showcase their creative solutions to real-world problems. By encouraging participants to think critically and innovatively, the hackathon aims to bridge the gap between academic knowledge and practical application.

Since its inception, SIH has garnered significant success in promoting out-of-the-box thinking among young minds, particularly engineering students from across India. Each edition has built on the previous one, refining its approach and expanding its impact. The hackathon not only offers students an opportunity to showcase their skills but also encourages collaboration with industry experts, government agencies, and other stakeholders.

The last date of offline registration for the internal smart India hackathon was 17th September 2024. Shortlisted teams from the event will be registered for the Smart India hackathon scheduled in November 2024.

Students are timely provided required data to create and present their ideas though power point presentation. With the information circulated through the department heads of CGPIT, total 31 teams were registered for the internal hackathon 2024. Thus total 186 innovative students showed their enthusiasm for this mega event. The event was conducted at two venues, E-101 and D-101 classrooms at CGPIT, UTU.

Glimpse of Hackathon Event