COMPUTER ENGINEERING
DEPARTMENT

Presenting 11th issue of half yearly departmental NEWSLETTER that consists of events, achievements, moments and much more...

What is covered in
THIS ISSUE

The Government Engineering College, Gandhinagar (GECG) was established in 2004 to give higher education in engineering and technology. The institute is recognized by the All-India Council of Technical Education (AICTE), New Delhi, and the Institute of Engineers (India). The college is administered by the Directorate of Technical Education, Gujarat State, Gandhinagar, and is affiliated with Gujarat Technological University (GTU).

All the courses of this college were taught according to the GTU (Gujarat Technological University) syllabus and exams.

In November 2007, the college moved to its new campus at Sec-28, near GEB, inaugurated by Smt. Aanandiben Patel, Minister for Higher and Technical Education. It is spread over 33 acres (130,000 m2) of land.

Principal's Message

Dr. Sweta Dave
Principal GECG

Dear faculty, staff & students,

" To those who see with loving eyes, life is beautiful. To those who speak with tender voices, life is peaceful. To those who help with gentle hands, life is full. And to those who care with compassionate hearts, life is good beyond all measure! "

I Dr. Sweta P. Dave as the Principal of the prestigious educational organization, Government Engineering college of Gandhinagar, with a compassionate heart Invites you to have an Initial peak of our organization's vision & values. Government Engineering college Gandhinagar primarily stands to nurture the shelved potential hidden in the young talent. We intend to provide a platform to the students to let out their creativity and channelize their knowledge and young inspirational energy.

At GEC Gandhinagar, the joyful experience of academics and the energetic bursts of co-curricular activities Integrate to create an all-round experience for fellow students and attendees. Our highly qualified faculties and management makes sure our fellow students become capable to stand out of the competition in the outside world.

GEC Gandhinagar brings a holistic academic as well as a practical approach for the students to become compatible and knowledgeable to the market needs. And we believe In this statement a lot, our faculties are well qualified and trained to deliver the knowledge in a playful form and not letting students just to mug up.

At last, I want to convey that we focus on the overall development of our students. We also look after the staff members and the college resources to provide students with the highest quality of academics value. I will heartily invite you to join our prestigious organization and become part of our family.

H.O.D.'s Message

Dr. Dhaval Parikh
HOD, CE Department

Dear Faculty and students,

The Department of Computer Engineering, established in 2004, has recorded a consistent improvement in its academic, research, and placement performance till now. I am elated to tell you that the department stands on the strength of experienced and well-qualified faculty who are very dedicated to teaching and also involved in the up-gradation of knowledge. Their research experience will help to cultivate the future of our students.

The B.E. Computer engineering program includes computer operations on different languages, data generation, collection and utilization of information. The course imparts all the basics as well as the latest knowledge pertaining to the rapidly developing field of computers. The course is designed to keep students at pace with the practical field. The mission of the department is to produce and impart theory, principles, practice, and know-importance of computing in the information age. This is required for the critical analysis, design, evolution, and improvement of the computing system in the context of computers and industry services. To provide students with a strong foundation in the mathematical, scientific, and engineering fundamentals necessary to formulate, solve and analyze engineering problems and to prepare them for graduate studies.

About
GEC, Gandhinagar

Established in 2004, Government Engineering College, Gandhinagar (GEC-Gn) takes pride in its highly motivated students. Our students are life-long assets that help this institute to continuously evolve and work towards its Vision.Our College is Approved by AICTE.

The College is administrated by Directorate of Technical Education, Gujarat State, Gandhinagar. GECGN is affiliated to **Gujarat Technological University**.

About
Computer Department

Department of Computer Engineering is well posed to cater the needs of the course. It is equipped with well-developed laboratories to satisfy the course curriculum of various subjects related especially to the Computer field. The main backbone of the course is educating knowledge of computer and its engineering . Almost all fields are computerized to have ease of handling the problems of designing, manufacturing, servicing, researching, marketing and accounting.

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The mission of the department is to produce and impart theory, principles, practice and know-importance of computing in the information age. This is required for the critical analysis, design, evolution and improvement of computing system in context of computers and industry services. It is our objective that students should be able to pursue advanced studies in computer engineering and information technology on a competitive universal basis. The college has well established computer labs which are facilitated with IBM, X series Xeon & dual processor Pentium servers, Compaq server and several hundred work stations connected in LAN & WAN.

Vision & Mission

Vision

- To achieve excellence for providing value based education in Computer Engineering through innovation, team work and ethical practices.

Mission

- To produce computer science and engineering graduates according to the needs of industry, government, society and scientific community.

- To develop partnership with industries, government agencies and R & D Organizations

- To motivate students/graduates to be entrepreneurs.

- To motivate students to participate in reputed conferences, workshops, symposiums, seminars and related technical activities.

PEOs & PSOs

Program Educational Outcomes (PEOs)

- To provide students with a strong foundation in the mathematical, scientific and engineering fundamentals necessary to formulate, solve and analyze engineering problems and to prepare them for graduate studies, R&D, consultancy and higher learning.

- To develop an ability to analyze the requirements of the software, understand the technical specifications, design and provide novel engineering solutions and efficient product designs.

- To provide exposure to emerging cutting edge technologies, adequate training & opportunities to work as teams on multidisciplinary projects with effective communication skills and leadership qualities.

- To prepare the students for a successful career and work with values & social concern bridging the digital divide and meeting the requirements of Indian and multinational companies.

- To promote student awareness on the life-long learning and to introduce them to professional ethics and codes of professional practice

PEOs & PSOs

Program Specific Outcomes (PSOs)

- By the completion of Computer Engineering program the student will have following Program specific outcomes.

- Design ,develop, test and evaluate computer based systems by applying standard software engineering practices and strategies in the area of algorithms, web design, data structure, and computer network

- Apply knowledge of ethical principles required to work in a team as well as to lead a team

Faculty, CE Department

Dr. Dhaval Parikh
HOD, CE Department

Dr. Harikrushna B Jethva
Associate Professor

Dr. Sanjaykumar Patel
Associate Professor

Dr. Vimal B Vaghela
Associate Professor

Faculty, CE Department

Prof. N.K.Prajapati
Assistant Professor

Dr. D.P.Khem
Assistant Professor

Prof. B.U.Gadhia
Assistant Professor

Faculty, CE Department

Prof. N.D. Shah
Assistant Professor

Prof. Nitin Raval
Assistant Professor

Dr. Hemani Shah
Assistant Professor

Dr. Nikhil Singh
Assistant Professor

Faculty, CE Department

Prof. Ashwin Prajapati

Assistant professor

Prof. Viral R. Patel
Assistant Professor

Dr. Mihir Mehta
Assistant Professor

Prof. Manisha Valera
Assistant Professor

Infrastructure Details

The building no. 5 is allocated to CE-IT department. It is a three storey building with around 25 rooms for lectures, different Labs particularly for hands-on practice on machines and cabin for the respected faculties and HOD sir. The entire building is under the surveillance of CCTV camera to maintain the safety and integrity of the Department.

Entire building is facilitated with high-speed Wi-Fi network for easy networking. The labs are provided with well-maintained WLAN network, efficiently maintained by our networking genius Prof. Prashant Chaudhari.

Programming Lab

The laboratories are equipped with a number of desktop computers. The current software resources include open-source programming SDKs. The lab is used for the course subjects like C, C++ programming etc.

Database Lab

A database management system is computer software that provides a way to manage data. DBMS lab aims at practicing and achieving this aim by using various software's such as SQL, ORACLE, and MS – Access etc.

Application Development Lab

Website Development includes both front end and back end including database management and dynamic functionality of website as per the user actions. Although we work with various tools/languages to achieve this functionality such as - ASP.NET, PHP, JSP but we primarily focus on .NET

Network Lab

Networking is a key area in the field of computers that deals with the physical connectivity of computers which is monitored by a combination of special hardware and software. The course curriculum provides from the coverage of basics to advanced applications and services, while providing a platform for hands-on practical experience and soft-skills enhancement.

PG Research Lab 💻

The ability of a computer or other machine to perform those activities that are normally thought to require intelligence. The branch of computer science concerned with the development of machines having this ability. Early AI projects, such as playing chess and solving mathematical problems, are now seen as trivial compared to visual pattern recognition, complex decision making, and the use of natural language

OOP Lab 💻

The laboratory is equipped with a number of desktop computers. The current software resources include a number of Object Oriented Programming SDKs, Integrated Development Environment like Eclipse, EditPlus etc. and Object Oriented Software Engineering tools.

Clubs at GECG

Club IDE

A Community, By the Students, For the Students

It is an initiative by CE/IT Dept of GEC-Gn. This is community for the student and by the student. Here the students grow their knowledge in a peer-to-peer learning environment and bulid solutions for local businesses and their community.

https://clubs.gecg28.ac.in/

https://instagram.com/theideclub?igshid=1x6stwsrt04q

https://www.linkedin.com/company/the-ide-club

https://discord.gg/vXNCpKXzET

https://twitter.com/club_ide

GDSC GEC - Gandhinagar

Google Developers Student Club

Google Developer Student Clubs (GDSC) are community groups for college and university students interested in Google developer technologies. Students from all undergraduate or graduate programs with an interest in growing as a developer are welcome. By joining a GDSC, students grow their knowledge in a peer-to-peer learning environment and build solutions for local businesses and their communities.

🌐 https://gdsc.community.dev/government-engineering-college-gandhinagar/

📷 https://instagram.com/gdsc_gecg

in https://www.linkedin.com/company/gdsc-gec-gandhinagar
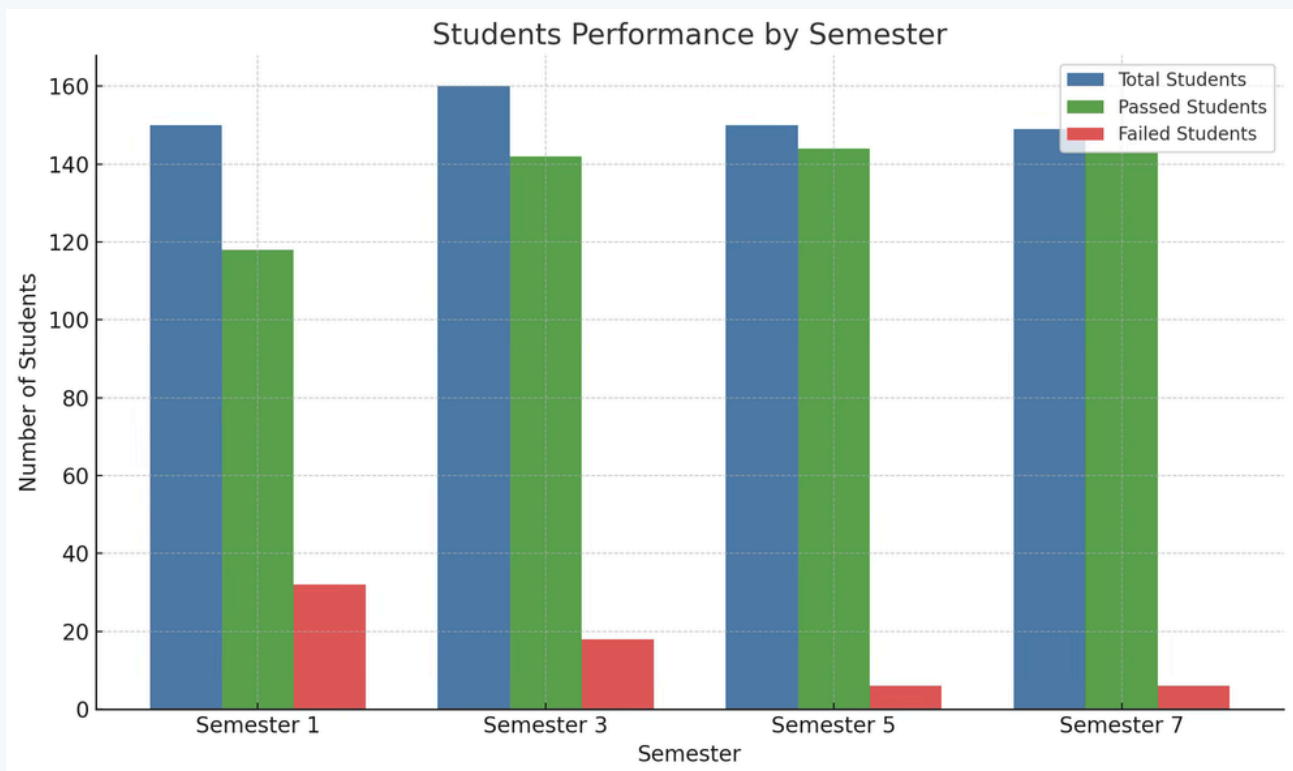
▶ https://youtu.be/snyOV3lqiM8

🐦 https://twitter.com/gdsc_gecg

Result **Analysis**

✓ B.E. Result for Winter-2025

Placement

✓ In 2025, Students from CE Department are placed in various MNCs likewise E infochips, odoo, Meditab, Silver touch technologies, Tatvasoft etc.

Highest Package 5.4 LPA
Average Package 3 LPA

Companies visited campus this year...

Faculty's Achievements

- **Ashvin Prajapati**

- Prof. Ashvin Prajapati has been recognized as an Active SPOC (Single Point of Contact) for NPTEL by IIT Madras, acknowledging his continuous contribution to the successful coordination of NPTEL courses.
- Prof. Ashvin Prajapati received the NPTEL Translation Certificate for translating course content of Object-Oriented Analysis and Design (Batch 61) on 21st January 2025, awarded by IIT Madras.
- Prof. Ashvin Prajapati was awarded the NPTEL Translation Certificate for translating the Operating Systems course (Batch 62) on 7th April 2025, by IIT Madras.

Faculty's Achievements

- **Dr. D.P.Khem**

- Prof. D. P. Khem, from the Computer Engineering Department, has successfully completed his Ph.D. from Gujarat Technological University (GTU). The official notification was published on 24th January 2025. His research was conducted in the field of Natural Language Processing (NLP), with the thesis titled: "Enhancing Text Translation with Context-Driven Text Simplification."

- **Prof. N.D. Shah**

- Prof. Nrupesh Shah delivered an expert lecture on the topic "Computer Networks: History and Future" at Government Polytechnic, Gandhinagar on 3rd April 2025.

Faculty's Research & Publication

- **Prof. Manisha Valera**

- Prof. Manisha Valera published a research paper titled "Advanced Deep Learning Models for Improving Movie Rating Predictions: A Benchmarking Study" in BenchCouncil Transactions on Benchmarks, Standards and Evaluations, Volume 4 (2024), Article ID: 100200. The paper is available online from 18 Apr 2025.

- Prof. Manisha Valera has Published a research paper titled "Optimized Movie Recommendation via Sentiment Analysis & Hyperparameter Tuning" in Jurnal Kejuruteraan, Vol. 37(3), 2025 (Scopus/WOS). The study enhances movie recommendations using sentiment analysis and machine learning optimization.

Faculty's Participation

- **Dr. Hemani Shah**

- Prof. Hemani Y. Shah attended a Faculty Development Program (FDP) on "Empowering Educators through Research and Incubation Excellence and NEP Insights" organized by i-Hub & NITTTR. The FDP was held from 1st June 2025 to 6th June 2025 (6 days) at i-Hub, Ahmedabad.

- **Prof. Viral R. Patel**

- Prof. Viral R. Patel attended a Faculty Development Program (FDP) on "Digital Forensic Investigation and Incident Response at GTU" organized by GTU. The FDP took place from 3rd March 2025 to 7th March 2025 (5 days) at GTU.

Student's Achievement

National Aeronautics and Space Administration
Mary W. Jackson NASA Headquarters
Washington, DC 20546-0001

Dear manan_sanghvi,

On behalf of the National Aeronautics and Space Administration and NASA's Vulnerability Disclosure Policy (VDP), we would like to recognize your efforts as an independent security researcher, both in identifying the vulnerability you submitted and for following NASA's VDP policy and guidelines in responsibly reporting this to us.

The ability to detect and report on security vulnerabilities is a valuable skill in the information security industry. Your reporting has facilitated NASA's awareness of otherwise unknown vulnerabilities and helped us protect the integrity and availability of NASA information.

Please accept this letter as a token of our appreciation for your efforts in detecting this vulnerability, and better enabling NASA to continue its advances in science, technology, aeronautics, and space exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of the Earth. We are all in this together as a security community and your participation and expertise is commended.

Sincerely,

Mike Witt
Senior Agency Information Security Officer SAISO
NASA Office of Chief Information Officer OCIO
NASA Vulnerability Disclosure Policy VDP

January 2, 2025

Sanghvi Manan A. (240133107022)

Manan Sanghvi (Enrollment No. 240133107022, Semester 4) has been appreciated by NASA for responsibly identifying and reporting a security vulnerability under its Vulnerability Disclosure Policy (VDP), contributing to the enhancement of NASA's cybersecurity.

Student's Creativity

Godhaniya Nirav Dineshbhai (Enrollment No. 240130107038, Semester 2)

Abhigyan Gautam (Enrollment No. 240130107001, Semester 2)

Student's Creativity

મારું નાનું જગત..

હું સૌથી નાનો, ઘરનો તારો,
બધાનો લાડકો, સૌથી પ્યારો।
માના પ્રેમમાં મળે છે શાંતી,
પપ્પાના સાથમાં હંમેશા ખુશહાલી।

બે બહેન છે મારી, ખુશીના રંગ,
મારા સપનાને આપે નવા ઝુલાંગ।
હસે છે, રમે છે, મને શીખવે,
હર પળને પ્રેમથી જીવંત કરે।

"માના મમતા, પપ્પાનો આશરો,
એના વગર મારી દુનિયા છે અધૂરું સાથો।"

બહેનોની હંસી, જેમ મીઠો સંગીત,
મારા હૃદયમાં છે એમનું સ્મિત।
તેમની બાહોમાં છે સુરક્ષાનું જગત,
એમનો પ્રેમ આપે મને નવા પથ।

"હર સવાર તેમનાં મુખનાં પ્રકાશથી શરૂ થાય,
તેમની સાથે હાસ્યમાં જીવી શકાય।"

મારું પરિવાર, મારી દુનિયાનું સૂર્યપ્રકાશ,
તેમના વગર લાગેએ હું નિરાશ।
સાથે રહીએ, હંમેશા સાથે હસીએ,
તેમના પ્રેમમાં દરિયો સમેટીશું।

"આ બાંધીની મજલ, આ અનમોલ પ્રેમ,
મારું પરિવાર છે મારા હૃદયનો હેમ।"

દરેક દિવસ હોય તેમનો પ્યારનો તહેવાર,
તેમનાં સાથે જ છે મારું જીવન આધારા।
ક્યારેય ના દૂર થાય, હંમેશા રહે સહેજ,
મારું પરિવાર છે મારી દુનિયાનું આધારા।

Poetry
Dev Kanakhara (Enrollment No. 240133107010, Semester 5))

Student's Creativity

The Last Leaf

In a quiet village nestled between misty hills, lived a young girl named Elira. She was an artist with a heart full of dreams but eyes dimmed by sorrow. After losing her parents in a storm the year before, Elira stopped painting. Her once-vibrant home now echoed with silence and dust.

Each day, she would sit by the window of her attic room, watching an old ivy vine crawling up the stone wall of the house next door. The vine had grown for years, shedding leaves slowly as autumn approached.

One morning, the doctor visited. "She's lost the will to live," he told the kind old neighbor, Mr. Rowan. "She believes when the last leaf falls, her time will come too."

Mr. Rowan was an artist too - a retired painter who hadn't touched a brush in over a decade. But something in Elira's fading spirit stirred his soul. That night, during a raging storm, he crept out into the wind and rain with his paints and brushes.

The next morning, Elira opened her eyes, fully expecting the vine to be bare. But to her surprise, one strong green leaf clung to the wall.

Days passed, the storm ended, and still, the last leaf didn't fall.

With a spark of hope, Elira began to eat, then walk, and finally - she picked up her brushes again. Slowly, life returned to her.

Weeks later, she knocked on Mr. Rowan's door to thank him - but he never answered.

The nurse told her, "Mr. Rowan passed away the night of the storm... pneumonia. But before he died, he left behind his final masterpiece."

Elira walked to the wall and looked closely.

The last leaf... was not real.

It was a painting - perfectly detailed, brave, and bright - just like the soul who painted it.

Moral: Sometimes, a single act of kindness can save a life - even if no one ever knows.

Story
Deval Patel(Enrollment No. 240133107139, Semester 4)

Tech Updates ⟳✓

1. Apple Introduces Metal 4 with Native AI Capabilities: Apple has integrated native AI capabilities directly into its Metal 4 graphics API, allowing Mac developers to run AI computations on GPUs without relying on cloud services. This marks a significant step towards more localized and efficient AI processing on Apple devices.

- Link: [https://dev.to/shiva_shanker_dec82951917/top-10-tech-news-that-changed-everything-this-month-july-2025-a-developers-perspective-3ka0]

2. Google Cloud Outage Causes Widespread Internet Disruptions: A minor bug in Google Cloud Platform led to extensive internet disruptions, impacting major applications such as Snapchat, Spotify, and Discord. This incident underscores the increasing global dependence on cloud infrastructure and the critical need for resilient systems.

- Link: https://tsttechnology.io/blog/latest-tech-news-and-updates

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Tech Updates ⟳✓

3. Microsoft's AI Outperforms Doctors in Diagnosis: Microsoft has unveiled its AI Diagnostic Orchestrator (MAI-DxO), an intelligent multi-agent system that achieved 85.5% accuracy in clinical case analysis, significantly outperforming human doctors (20% baseline) in recent tests across 300+ medical cases. This represents a groundbreaking advancement in AI's role in healthcare.

  - Link: [https://medium.com/@palashjain9276/the-future-is-now-todays-biggest-ai-tech-breakthroughs-july-1-2025-50d32cb4277d]

4. Major npm Registry Security Breach Compromises 847 Packages: A social engineering attack allowed unauthorized access to maintainer accounts on the npm registry, leading to the compromise of 847 packages with malicious code designed to steal environment variables and API keys. The attack went undetected for three weeks, highlighting ongoing software supply chain vulnerabilities.

  - Link: [https://dev.to/shiva_shanker_dec82951917/top-10-tech-news-that-changed-everything-this-month-july-2025-a-developers-perspective-3ka0]

Tech Updates ⟳✓

5. BYD Field-Tests Solid-State EV Batteries with 1,500 km Range: China's BYD is reportedly field-testing solid-state electric vehicle batteries boasting nearly 400 Wh/kg energy density, which could enable a remarkable 1,500 km range on a mere 12-minute charge. This signifies a major leap forward in EV battery technology.

- Link: [https://ts2.tech/en/global-battery-tech-and-energy-storage-developments-june-july-2025/]

6. Microsoft Authenticator to Discontinue Password Support: Starting July 2025, Microsoft Authenticator will cease its autofill functionality, with complete removal of password accessibility features by August 2025. Users are advised to migrate stored passwords to alternative password managers.

- Link:https://cybersecuritynews.com/microsoft-authenticator-password/

Tech Updates

7. Roblox Releases New Dig Game for Early Access: Roblox recently launched "Dig" for early access on July 1, 2025. This digging simulator allows players to explore landscapes, hunt treasures, and upgrade tools, quickly gaining attention for its engaging mechanics.

- Link: [https://timesofindia.indiatimes.com/sports/esports/all-active-roblox-dig-codes-for-july-2025/articleshow/122230197.cms]

8. ISRO Transfers 10 Technologies to Indian Companies: India's space regulator, IN-SPACe, is transferring 10 technologies developed by ISRO to three Hyderabad-based companies: Zetatek Technologies, Avantel, and Jisnu Communications. This move aims to advance India's private space industrial capabilities across various segments.

- Link: [https://timesofindia.indiatimes.com/city/hyderabad/3-hyderabad-companies-to-get-10-isro-technologies/articleshow/122241104.cms]

Tech Updates

9. Meta Launches "Superintelligence Lab" with $14 Billion Investment: Meta has officially entered the AGI (Artificial General Intelligence) race by launching a new division, Meta Superintelligence Lab, with a significant $14 billion investment. This initiative is led by former Scale AI founder Alexandr Wang.

- Link: [https://medium.com/@palashjain9276/the-future-is-now-todays-biggest-ai-tech-breakthroughs-july-1-2025-50d32cb4277d]

10. Global Battery Tech Advances with Higher Capacity Phone Batteries: Smartphone manufacturers are poised for a leap in battery capacity due to materials innovation, with next-generation designs expected to double silicon content in Li-ion cells, potentially leading to single-cell phone batteries around 9,000 mAh capacity for multi-day battery life.

- Link: [https://ts2.tech/en/global-battery-tech-and-energy-storage-developments-june-july-2025/]

Events 📣

Alumni meet

Events 📢

Alumni meet

- The Department of Computer Engineering and Information Technology organized an alumni meet for all batches on February 27, 2025, in Room No. 5001. The program began with a soulful prayer by Mr. Gajar Dhruv, followed by an inspiring story shared by Dr. Pinal Patel. At 11:15 AM, Dr. D. A. Parikh, Head of the CE/IT Department, formally welcomed the alumni and introduced the program by presenting the Vision and Mission of the Institute and the Department. The event proceedings were smoothly conducted by Prit Makadiya, a 4th-year IT student, along with his team.

Head of the Department

Dr. Dhaval Parikh
Head of C.E. Department

Newsletter Coordinator

Prof. Manisha Valera
Assistant Professor, Computer Engineering

Newsletter Editors

Dev Kanakhara

CE Semester 05
EN NO.240133107010

Thank You