COMPUTER ENGINEERING
DEPARTMENT

Presenting, 9th 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

Prof. J.S.Dhobi
Associate Professor

Dr. Pinal J. Patel
Assistant Professor

Dr. Pratik Barot
Assistant Professor

Faculty, CE Department

Dr. Sanjay Patel
Assistant Professor

Dr. N.S.Shroff
Assistant Professor

Prof. N.K.Prajapati
Assistant Professor

Prof. D.P.Khem
Assistant Professor

Prof. B.U.Gadhia
Assistant Professor

Faculty, CE Department

Prof. N.D. Shah
Assistant Professor

Prof. Yogendra Tank
Assistant Professor

Dr. Hemani Shah
Assistant Professor

Prof. Nikhil Singh
Assistant Professor

Prof. Nitin Raval
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

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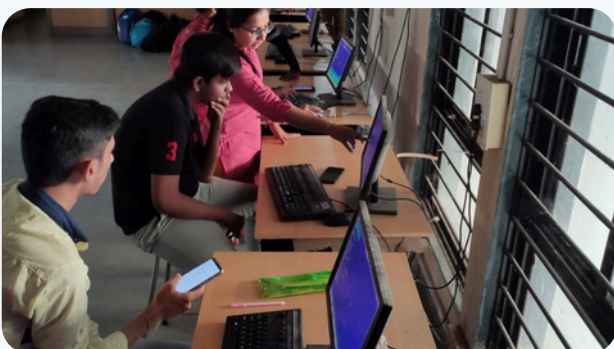
A database management system is computer software that provides a way to manage data. DBMS lab aims at practicing and achieving this aim by using various software's such as SQL, ORACLE, and MS – Access etc.

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 S-2023 & W-2023

Computer Engineering Students Performance by Semester
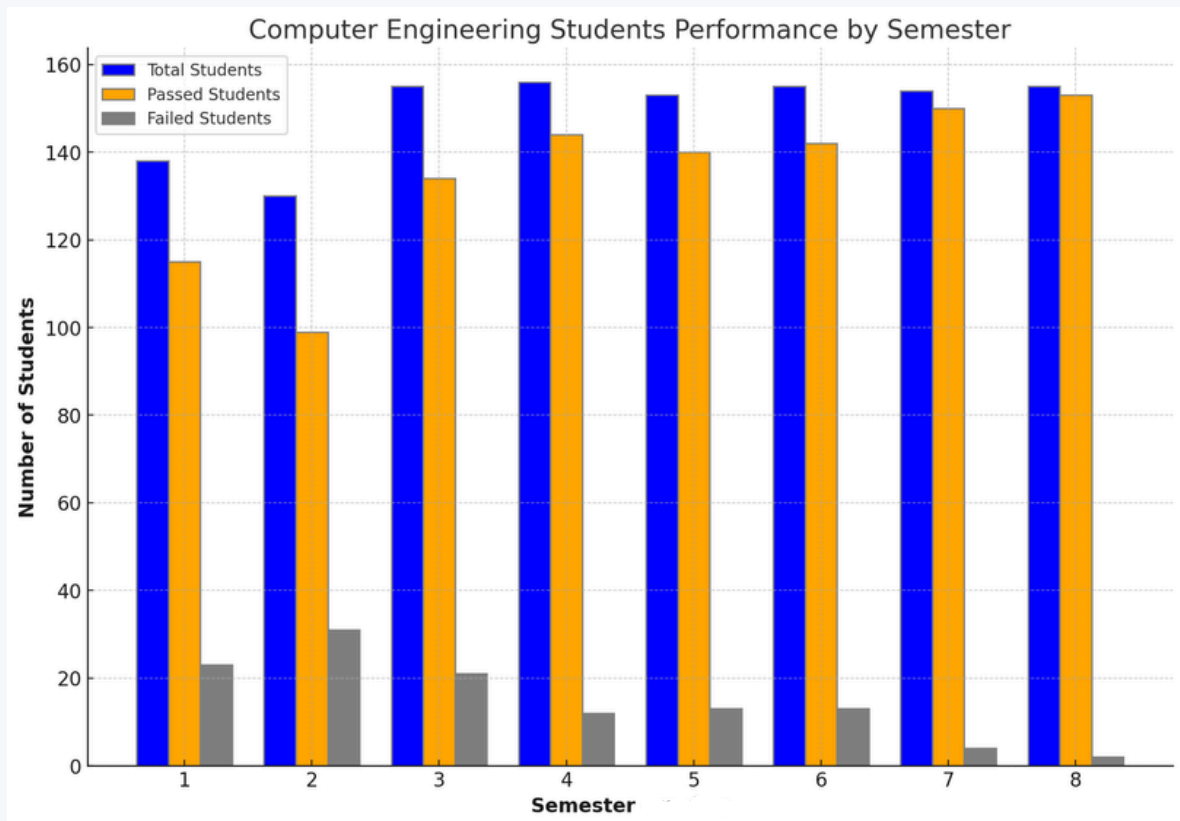
Placement

In 2024, Students from CE Department are placed in various MNCs likewise Zeus learning,Argusoft, Meditab, Silver touch technologies, Tatvasoft etc.

Highest Package 6.12 LPA
Average Package 4 LPA

Companies visited campus this year...

Faculty's Achievements

- **Ashvin Prajapati**

- From January to June 2024, Ashvin Prajapati was honored as an Active SPOC (Single Point of Contact) by NPTEL for his exceptional dedication and effectiveness. In this role, he facilitated the smooth execution of NPTEL courses, coordinated logistics, addressed student queries, and ensured efficient communication. This recognition highlights his commitment to educational excellence and his significant contributions to NPTEL initiatives.

Faculty's Research & Publication

- **Dr. Pinal J. Patel**

- In June 2024, Dr. Pinal J. Patel published two significant research papers in the African Journal of Biological Sciences. The first paper, "Handwritten Gujarati Vowel Recognition Using Deep Learning Models" (Vol. 6, Issue 4, pp. 3184-3195), explores deep learning techniques for recognizing handwritten Gujarati vowels. The second paper, "An Assessment of Machine Learning and Ensemble Models for Diabetes Prediction" (pp. 3212-3221), evaluates various models for predicting diabetes. Both papers, indexed by Scopus, underscore Dr. Patel's impactful contributions to computational linguistics and medical diagnostics.

Faculty's Research & Publication

- **Dr. Mihir Mehta**

- In March 2024, Dr. Mihir Mehta, Dr. Kajal Patel, and Dr. Komal Anadkat published "Efficient Framework of Security for Internet of Things" in the journal Reliability: Theory & Applications. This research, in Volume 19, Issue 1(77), page 217, enhances IoT device security by addressing critical vulnerabilities. The study's publication in a Scopus-indexed journal highlights its international significance and impact on IoT security.

Faculty's Participation

- **Dr. Pinal J. Patel**

- In January 2024, Dr. Pinal J. Patel conducted an 8-week NPTEL course, "Introduction to Programming in C," aimed at enhancing programming skills. This program provided a comprehensive introduction to C programming, covering fundamental concepts and practical applications, catering to both beginners and those seeking to strengthen their programming foundations.

- Following this, Dr. Patel led a 12-week NPTEL course, "Programming in Java," from January to April 2024. This extensive program offered in-depth knowledge and hands-on experience in Java development, covering topics such as object-oriented programming, data structures, and advanced Java concepts, preparing participants for complex software development tasks. Both courses were conducted online, offering flexible learning opportunities.

Student's Achievement

Bhargavi Machhi Got Internship at AWS.

We are delighted to announce that Bhargavi Bharatbhai Machhi, a second-year BE Computer Engineering student at Government Engineering College (GEC), Gandhinagar, has been selected for an internship at Amazon Web Services (AWS). Bhargavi will join as an AFE SDE Intern at the Amazon Development Center in Hyderabad from May 6th to June 28th, 2024.

This prestigious internship opportunity aligns with Bhargavi's academic and professional aspirations. Despite the potential challenges of balancing academic commitments and the internship, Bhargavi has assured proactive measures to manage any overlaps, ensuring minimal disruption to her studies.

Student's Achievement

The college administration, including Principal Dr. S. P. Dave, has expressed full support for Bhargavi's internship, acknowledging the valuable experience she will gain at AWS. This endorsement reflects GEC Gandhinagar's commitment to fostering professional growth opportunities for its students.

Congratulations, Bhargavi, on this remarkable achievement! We are proud of your hard work and dedication, and we wish you great success in your upcoming internship at Amazon.
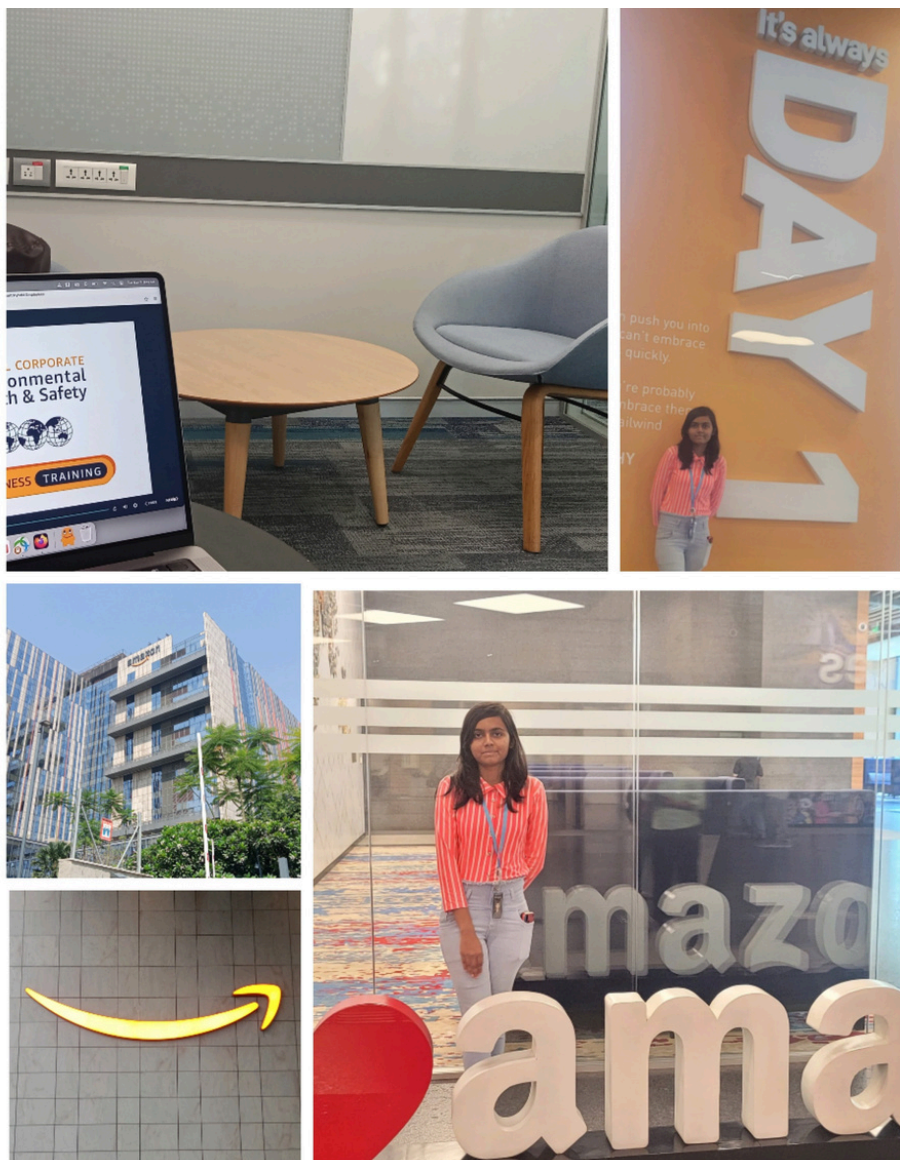
Student's Achievement

Hello,

My name is Bhargavi Machhi.

During my internship at Amazon as a Software Development Engineer Intern from May 6, 2024, to June 28, 2024, I was tasked with automating the address deletion process. I developed a user interface for address deletion using AngularJS and HTML. For the backend, I implemented the logic in Java and utilized AWS Lambda to call the API. Additionally, I audited the details of address deletion using Java and AWS DynamoDB tables.

I successfully deployed all my work to production and completed all assigned tasks. This experience significantly enhanced my technical skills, particularly in front-end development, backend processing, and cloud technologies. I gained extensive knowledge in full-stack development and learned how to integrate different technologies to solve real-world problems. Furthermore, the internship provided me with a valuable understanding of professional workflows and the importance of deploying reliable and efficient code.

The positive feedback and the inclined vote from my manager were encouraging, indicating potential opportunities for a full-time offer or a six-month internship. This experience has been instrumental in shaping my career path and reinforcing my passion for software development.

~Bhargavi Machhi

Ridham Vasoya received a certificate for attending the event "Hactoberfest: An Introduction" on September 26th.
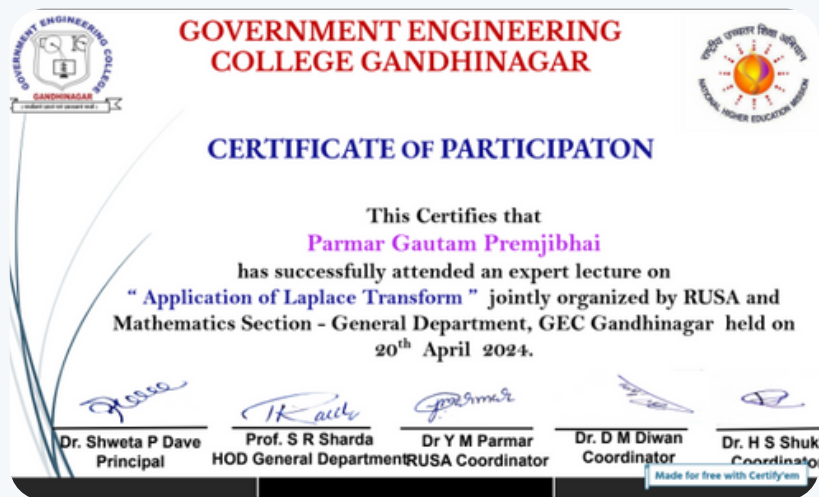
Ridham Vasoya(230130107149)
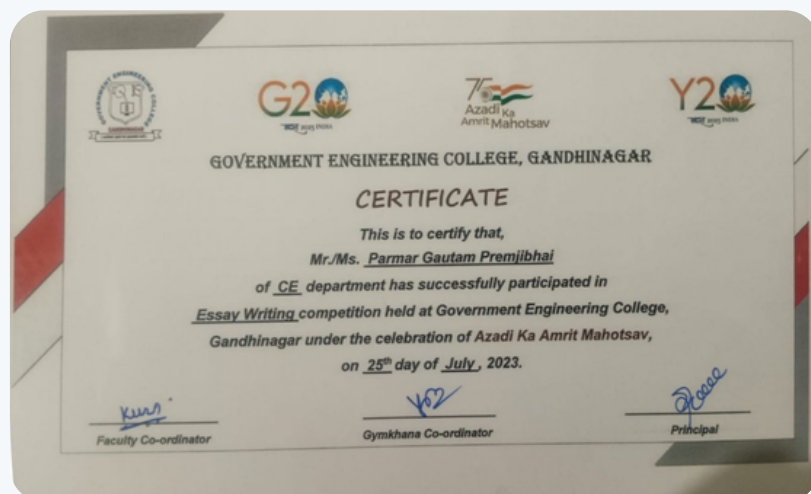
Parmar Gautam Premjibhai from the CE department participated in an Essay Writing competition at Government Engineering College, Gandhinagar, on July 25, 2023, during Azadi Ka Amrit Mahotsav.

Parmar Gautam(230130107074)

Parmar Gautam Premjibhai attended an expert lecture on "Application of Laplace Transform" at Government Engineering College, Gandhinagar on April 20, 2024.

Parmar Gautam(230130107074)

Parmar Gautam got 66% marks in E-mail security quiz organised by ministry of electronics & information technology.

Parmar Gautam(230130107074)

Parmar Gautam Premjibhai completed the Microsoft Learn Student Ambassadors Cloud Skills Challenge on Microsoft Azure Fundamentals.

Parmar Gautam(230130107074)

Parmar Gautam received a certificate for attending the event "Hactoberfest: An Introduction" on September 26th.

Parmar Gautam(230130107074)

Digital India.

"Digital India means New Vibrant India".

Digital India campaign is a campaign which is initiated by the Indian Government to increase online work via Internet connectivity fixing and improving. Our government has started this campaign for easily accessible public services. "Mr Narendra Modi", the honarable leader of India, launched it on 1st July 2015.

A digital week was celebrated with a lot of discussion to finalize the requirement and features of Digital India. Digital training on the technologies will be provided for acheiving literacy in citizens. Mobile phones will be used as the personal identity for various transactions. People in rural or urban areas will have access to all digital services and Internet of things on their mobiles or other gadgects.
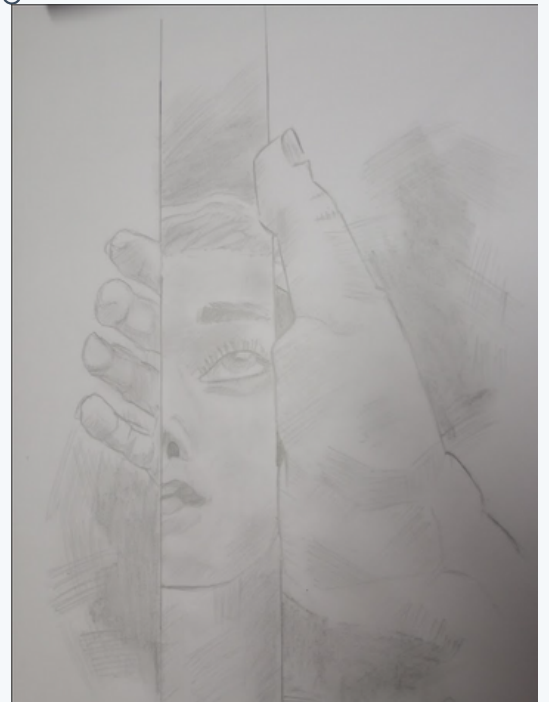
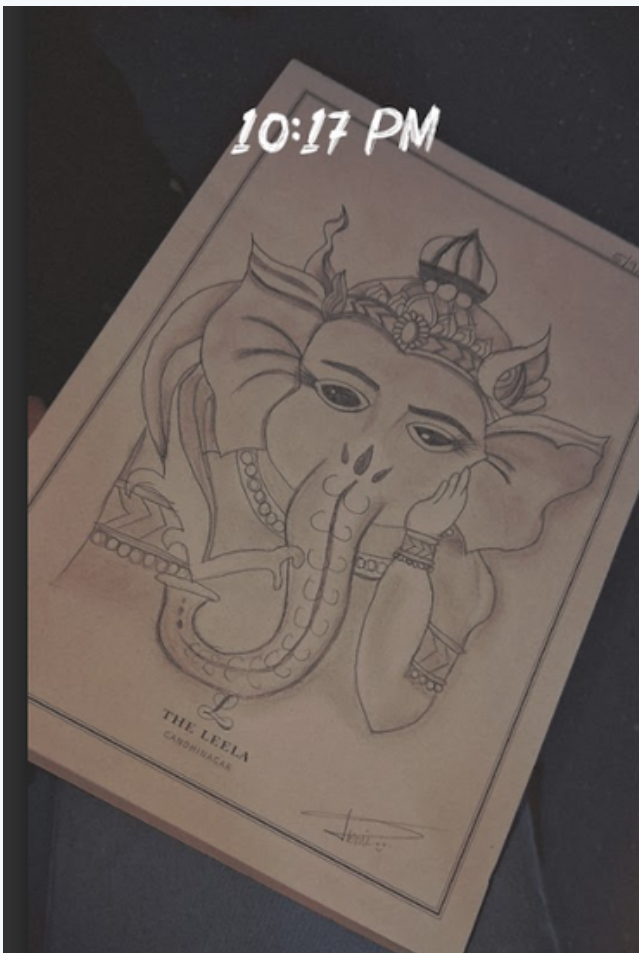Essay By Dharmik sindroja

Dharmik sindroja(230130107134)

Student's Creativity
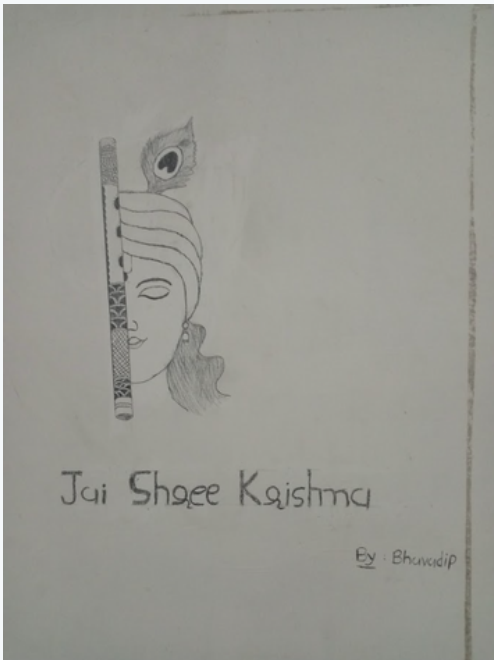
Bhavdip Dhandhiya(210130107112)

Parmar Padmraj(230130107076)

Jalondhara Hemanshi(23013010741)

Parekh Srujan(230130107073)

Tech Updates ⟳✓

January :

- CES 2024 Highlights: Major tech companies showcased groundbreaking innovations at CES, including Samsung's world-first transparent micro-LED display and glasses-free 3D gaming display, and LG's C4 OLED TV with a brighter picture and faster processor (TechRadar) (Engadget).

- ASUS AirVision M1: ASUS introduced the AirVision M1, a wearable display that generates multiple virtual screens, enabling users to multitask effectively with its FHD Micro OLED display (Engadget).

- VTouch WHSP Ring: VTouch unveiled a ring that lets users whisper commands to their phone, enhancing discreet interactions with voice assistants (Engadget).

- AI-Powered Grills: Seergrills launched the Perfecta, an AI-powered grill capable of cooking a one-inch-thick steak in 90 seconds with precision temperature control (Engadget).

Tech Updates ⟳✓

February:

- Meta Quest 4 Release: Meta launched its new VR headset, Meta Quest 4, featuring enhanced graphics and advanced hand-tracking capabilities.

- Tesla's AI-Powered Autopilot Update: Tesla rolled out a significant update to its autopilot system, integrating more advanced AI for better real-time decision-making and safety improvements.

- Google's AI-Powered Search Enhancements: Google introduced AI enhancements to its search engine, providing more personalized and context-aware search results.

- NVIDIA's New GPUs: NVIDIA released its latest series of GPUs, boasting significant performance improvements for AI applications and gaming.

Tech Updates ⟳

March:

- Apple's AR Glasses Launch: Apple unveiled its long-awaited AR glasses, integrating seamlessly with iOS devices and offering immersive augmented reality experiences.

- Amazon's Next-Gen Echo Devices: Amazon introduced a new line of Echo devices with upgraded AI capabilities and better integration with smart home systems.

- Sony's AI Cameras: Sony launched a series of AI-powered cameras designed for professional photographers, featuring advanced subject recognition and tracking capabilities.

- Microsoft's AI-Powered Office Suite: Microsoft released an updated version of its Office Suite, incorporating AI features to enhance productivity and collaboration.

Tech Updates ⟳

April :

- Samsung's New Foldable Phones: Samsung introduced its latest foldable phones, featuring thinner and lighter designs with improved durability and battery life (TechRadar).

- Google's AI-Powered Cloud Services: Google expanded its cloud services with new AI-driven tools for data analysis and machine learning.

- Intel's Quantum Computing Breakthrough: Intel announced a significant breakthrough in quantum computing, promising faster and more efficient processing capabilities.

- Fitbit's Health Monitoring Update: Fitbit released a major update to its health monitoring devices, adding new features for stress tracking and sleep analysis.

Tech Updates

May :

- Microsoft's AI Shopping Tools: Microsoft launched AI-powered shopping tools in Bing and Edge to enhance the online shopping experience with better recommendations and information.

- WhatsApp's QR Code Data Transfer: WhatsApp introduced a local data transfer method using QR codes, simplifying the process of transferring chat history and account data between devices.

- Meta's New Social App: Meta launched a new app to rival Twitter, aiming to provide a fresh social media experience (TechRadar).

- Elon Musk's Vision for X: Elon Musk announced plans for X, an "everything app" aimed at offering a comprehensive digital experience beyond traditional social media (ScienceDaily).

Tech Updates ⟳

June:

- Apple's AI Research Center: Apple opened a new AI research center focused on developing next-generation AI technologies and applications.

- Amazon's Drone Delivery Expansion: Amazon expanded its drone delivery service to more cities, aiming to improve delivery efficiency and reduce carbon emissions.

- Microsoft's Quantum Computing Services: Microsoft introduced new quantum computing services in its Azure cloud platform, making quantum computing more accessible to businesses.

- Tesla's Full Self-Driving Beta: Tesla expanded its Full Self-Driving (FSD) beta program, providing more drivers with access to advanced autonomous driving features.

Events 📢

HACK ધી Spring
(Hackathon)

On March 1st and 2nd, an Ideathon and Hackathon took place at GEC Gandhinagar, attracting over 80 teams to participate in the event. Alongside the competitions, the event featured various activities including expert lectures, providing participants with valuable insights and guidance. The Ideathon and Hackathon served as platforms for students to showcase their innovative ideas and technical skills, fostering creativity and collaboration within the collegiate community.

Events 📣

Glimpse of Hack the spring

Events 📣

Alumni meet

Date : 16/3/2024
Time : 11:00 am
Vanue : 5001

On March 16th, a significant Alumni Meet was held at GEC Gandhinagar, specifically catering to the Computer and IT departments. The event saw the participation of numerous esteemed alumni who generously shared their experiences and insights to guide current students. Dr. Dhaval Parikh and Prof. J.S. Dhobi, the Heads of Departments for Computer and IT respectively, graced the occasion, further enriching the gathering with their presence. The event provided a valuable platform for networking and knowledge exchange between alumni, faculty, and current students, fostering a sense of community and offering invaluable mentorship opportunities.

Events 📢

Glimpse of Alumni meet

Events 📢

AI & ML Speaker Session

Date : 21/2/2024
Time : 10:30 am
Vanue : 5001

Explain artificial intelligence to every kid and the importance of learning about it. Parth Parmar's topics included an overview of AI and ML, their differences, algorithms, applications (including a live demo), and an explanation of some common words like gemini. For students who are kindly interested in learning more about the area, Gunjan Tank has given one free course on AI/ML. Parth Parmar revealed a few intriguing details regarding Hack the Spring. and that caused the event to terminate.

Events 📢

Glimpse of AI & ML Session

Head of the Department

Dr. Dhaval Parikh
Head of C.E. Department

Newsletter Coordinator

Prof. Manisha Valera
Assistant Professor, Computer Engineering

Newsletter Editors

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Thank You