



6th issue of

# **NEWSLETTER**

JULY-DECEMBER EDITION



### PUBLISHED BY

INFORMATION TECHNOLOGY DEPARTMENT Government Engineering College, Gandinagar, Sector -28

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# NEWSLETTER JULY-DECEMBER EDITION

### **OVERVIEW**

The Government Engineering College, Gandhinagar (GECG) established in 2004 to give higher education was and technology. The All-India Council engineering of Technical Education (AICTE), New Delhi, and the Institute of Engineers (India) recognized the institute. 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 Sector-28, near GEB, inaugurated by Smt. Aanandiben Patel, Minister of Higher and Technical Education. It is spread over 33 acres (130,000 m2) of land.

# Principal's Message

Dear faculty, staff and 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!" 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 peek at our organization's vision and values. Government Engineering College Gandhinagar primarily stands to nurture the shelved potential hidden in young talent. We intend to provide a platform for students to express their creativity, knowledge, and youthful inspirational energy.

At GEC Gandhinagar, the joyful experience of academics and the energetic bursts of cocurricular activities integrate to create an all-around experience for fellow students and attendees. Our highly qualified faculty and management make sure our fellow students

capable of standing out from the competition in the outside world. We believe in not only educating but also empowering our students to make sure they feel like representatives of our prestigious organisation and create a meaningful experience for them during their time at the college.

GEC Gandhinagar provides a comprehensive academic and practical approach for students to become market-ready and knowledgeable. 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 let students just 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's resources to provide students with the highest quality academic experience. I will heartily invite you to join our prestigious organisation and become part of our family.

**Dr. Sweta Dave**Principarl, GEC Gandinagar



# H.O.D.'s Message

The Department of Information Technology, established in 2004, has recorded a consistent improvement in its academic, research, and placement performances 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 upgrading of knowledge. Their research experience will help cultivate the future of our students.

The B.E. Information Technology programme includes several layers of physical equipment (hardware), virtualization, management systems, automation tools, operating systems, and other system software and applications used to perform essential functions. User devices, peripherals, and software can be included in the IT domain.

Information technology (IT) is the use of computers to create, process, store, retrieve, and exchange all kinds of electronic data and information. IT is typically used within the context business operations as opposed to personal entertainment technologies. IT is considered to be a subset of information and communications technology (ICT). An information technology system (IT system) is generally an information system, a communications system, or, more specifically speaking, a computer system (including hardware, software, and peripheral equipment) operated by a limited group of IT users. To provide students with a strong foundation in the mathematical, scientific, and engineering fundamentals necessary to formulate, solve, and analyse engineering problems and to prepare them for graduate studies.

Prof. J.S. Dhobi
HOD,IT Department

## 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. Approved by **AICTE**.



The College is administrated by the Directorate of Technical Education, Gujarat State, Gandhinagar. GEC-GN is affiliated with **Gujarat Technological University(GTU)**.

## **About** IT Department

Department of Information Technology 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 focus of the course is educating students about information technology. Almost all fields have been computerised in order to make it easier to handle the problems of designing, manufacturing, maintenance, servicing, researching, marketing, and accounting.

GEC-GN offers its students a wide range of courses to choose from. This helps them to become multi-skilled personalities who can handle the challenges that industry and society will pose to them as future engineers. Committed to delivering excellence in everything that it does, our institute works towards reducing the gap between industry and education.

GEC-GN endeavours to educate its students in a manner that offers them an opportunity to excel in academics and be completely aware of their future industrial needs for professional expertise through an innovative and flexible curriculum. This trains the students on this campus to reach their highest potential.

The highly dedicated and educated faculty members of GEC-GN are experts in their professional fields. Their professional skills and industry linkages help students by grooming them to become competent engineers who will contribute to society and the economy in the long run.

The B.E. Information Technology programme includes computer operations in different languages, data generation, collection, and utilisation of information.

The course imparts all the basics as well as the latest knowledge about the rapidly developing field of computers. The course is designed to keep students in step with the practical field.

This requires critical analysis, design, evolution, and improvement of computing systems in the 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 B.E. Information Technology programme includes computer operations in different languages, data generation, collection, and utilisation of information.

The college has well-established computer labs that are facilitated with IBM's X series Xeon and dual-processor Pentium servers, a Compaq server, and several hundred workstations connected via LAN and WAN.

# **Vision & Mission**

### **Vision**

 To educate students to be innovative and technically competent IT professionals to meet the industrial and social requirements.

### **Mission**

- To produce technically capable and socially responsible graduates.
- To create facilities where students gain practical exposure to IT.
- To support research culture, consultancy work, and enhancement of entrepreneurship skills.
- To enhance industry interaction for good placements and real-world exposure.
- To induce moral, and ethical values and a spirit of social commitment.

# **PEOs & PSOs**

### **Program Educational Outcomes (PEOs)**

The graduate will be a competent professional with high-level technical proficiency in the field of information technology who can identify problems and develop innovative solutions to meet industrial needs.

The graduate will exhibit professionalism, teamwork, leadership skills, and exposure to current needs.

The graduate will be capable enough to adapt to the changes in roles and responsibilities through professional development and lifelong learning rather than self-study or continuing education in IT or managerial studies.

The graduates will ethically apply their computing knowledge and skills, considering societal, economic, and environmental factors.

### **Program-Specific Outcomes (PSOs)**

Foundations of Software Development: Use programming and software design principles to develop various software products in emerging areas.

Foundation of Mathematical Concepts: Ability to apply mathematical concepts to solve computation tasks and model real-world problems using appropriate data structures and suitable algorithms

Competent in Emerging Trends: Ability to use recent tools and techniques necessary for computing practices

Applications of Computing and Research Ability: The ability to use knowledge in various areas to identify research gaps and provide an innovative solution





Prof. J.S. Dhobi HOD, IT Department



Prof. Mahendrakumar Patel
Assistant Professor



**Prof. Komal Anadkat**Assistant Professor



Prof. Sureshkumar Patel
Assistant Professor



Prof. Hetal Chauhan Assistant Professor



Prof. Chetan Kapadiya
Assistant Professor



**Prof. Prashant Chaudhari**Assistant Professor



Prof. Anamika Mittal
Assistant Professor

# Faculty's Achievement

"Development Of A Multi-Modal Severity Prediction" Article was published by Prof. Hetal Chauhan on september 30, 2022, with ISBN no. 2147-6799.



Prof. Hetal Chauhan
Assistant Professor

**Placement** 

2023

#### **Faculty co-ordinator:**

• Prof. C M kapadiya

#### **Students Co-ordinator:**

- Jay Savaliya
- Khushi vakil
- Poojan dhaduk
- √ Total 29 students of IT Department are placed from 2023 passout batch.

# Student's Achievement

The UNESCO INDIA – AFRICA Hackathon is an annual 36 hours event that brings together students, educators, teachers, and the research community of India and its African partners to tackle the common challenges faced by their countries and serves as a facilitator for cultural amalgamation.

Ayush Solanki of the 5th semester was a finalist in the Unesco India Africa Hackathon 2022. The project work was on COPD Diagnoses. This Project is a complete solution to COPD diagnosing using various Al and machine learning tools and technologies.

It uses supervised learning models using classification algorithms to classify the possible disorder from the outcomes of the ABG and PFT tests.

PDF scanning is used for scanning these test reports.



Apart from that image processing is used for the classification of respiratory problems using the chest x-ray image dataset.

This Project also included stethoscope audio capturing and detection of COPD from heartbeat audio using audio processing and deep learning.

Also, the team has developed a medical health chatbot that chats in two languages, English and Hindi.

Blockchain is used to store all the medical records of the test.

In this project, apart from using data science and developing machine learning and deep learning models, I worked on integrating this model with Django and creating the rest APIs. He also developed the Flutter application to present the user interface of this project.



#### Smart India Hackathon (SIH)

• Smart India Hackathon (SIH) is an annual event organized by the Government of India, in which students from across the country participate in a nationwide competition to develop innovative solutions to problems faced by government agencies, industry, and society. The hackathon is open to engineering, science, and technology students, and aims to encourage innovation and entrepreneurship among young people.

# 降 સ્માર્ટ ઇન્ડિયા હેકાથોનમાં પ્રથમ ક્રમાંકે વિજેતા



ભારત સરકારના મિનિસ્ટ્રી ઓફ ઇલેક્ટ્રોનિક્સ એન્ડ ઇન્ફોર્મેશન ટેકનોલોજી દ્વારા તાજેતરમાં સ્માર્ટ ઇન્ડિયા હેકાથોનનું આયોજન કરવામાં આવ્યું હતુ. જેમાં સરકારી ઇજનેરી કોલેજ ગાંધીનગરના વિદ્યાર્થીઓએ ભાગ લઈને પ્રથમ ક્રમાંક પ્રાપ્ત ક્યી છે.  Students of the IT Department from semester 5 took part in the national-level event Smart India Hackathon (SIH) and also became the first runner-up nation-wise under the mentorship of Prof. M.N. Patel. Congratulations to the team on the behalf of IT department. Students did appreciating hard work.

The students worked on the project "Career Recommendation System."

#### Team Members:

- Chhatrapalsinh Zala
- Ayush Solanki
- Rashmin Gajera
- Arya Patel
- Janki Bhatt
- Aesha Dobariya



#### Azadi ka Amrit Mahotsav Hackathon 2022

- Azadi Ka Amrit Mahotsav Hackathon is an event organized by the Government of India to mark the 75th anniversary of India's independence. The hackathon is a nationwide competition in which students from across the country are invited to participate and develop innovative solutions to problems faced by government agencies, industry, and society.
- The hackathon is open to engineering, science, and technology students, and aims to encourage innovation and entrepreneurship among young people. During the event, participants work in teams to develop prototypes and working models of their ideas, which are then judged by a panel of experts.



- The hackathon is open to engineering, science, and technology students, and aims to encourage innovation and entrepreneurship among young people. During the event, participants work in teams to develop prototypes and working models of their ideas, which are then judged by a panel of experts.
- Three teams from IT Department were selected for Azadi Ka Amrit Mahotsav Hackathon this year.
   "Congratulations to all the students who participated in the hackathon on your achievement! You deserve this for your hard work and dedication."



 The Pioneers - Chattrapalsinh Zala -Mental health Diagnosis



 Wonderers - Zeel Parekh - Block chain Technology for Smart and Secured Governance



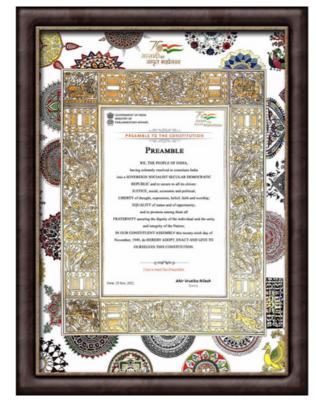
Informetica - Ishaq Miyawala Providing Suitable Govt.Schemes
 Details though Chatbot /
 MobileApp / Website

# Certificates and honors achieved by students

























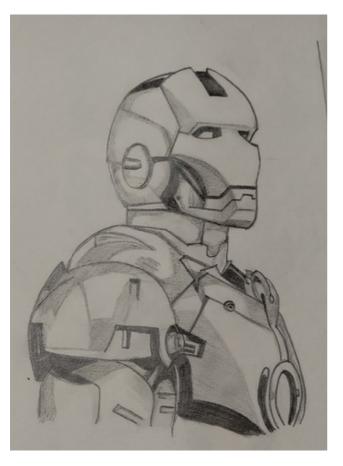


Made for free

# **Student's** Creativity



Krishna Kalathiya IT SEM 3



Basit Saiyed IT SEM-3



Aditya Lad IT SEM-5



Krishna Kalathiya IT SEM-3



Aditya Lad IT SEM-5

## **Tech** Blogs



### Just ChatGPT It!

The new AI bot ChatGPT, a tool from a power player in artificial intelligence called OpenAI, lets the users type questions using natural language. The chatbot then gives conversational answers to the inquiries. It keeps in mind the thread of dialogue, using previously asked questions to generate its responses. It derives its answers from the vast depths of the information on the internet.



The tool is effective in writing seemingly intelligent paragraphs based on user inputs, going beyond simple search. A research article could be written entirely on past scientific literature, which is already a part of ChatGPT's training. The output is concise, valid and not plagiarised, although being generic text.

You can ask the bot encyclopaedia questions like, "Explain the theory of relativity". You can tell it to write you a poem, and when it does, to "make it more interesting". You can also ask it to generate a computer program that can play tic-tac-toe.

It can also help you with birthday party ideas, planning a trip and even getting song-writing help. The major problem with the tool is, though it seems pretty knowledgeable, it doesn't really know anything. The Al recognizes text patterns from the internet and uses further human trained assistance to deliver dialog. The responses might sound legitimate but they can also be entirely wrong and implausible. Any questions "that are discriminatory, offensive, or inappropriate. This includes questions that are racist, sexist, homophobic, transphobic, or otherwise discriminatory or hateful" are strictly off limits for the Al.

The response to ChatGPT has been overwhelmingly positive, with many praising its advanced capabilities and ease of use. It remains to be seen how it will be used in the coming years, but it's clear that it has the potential to be a major player in the world of natural language processing.



# BLOG 2

### VIRTUAL WORLD – The NEW NORMAL



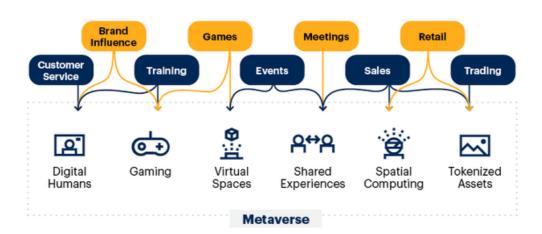
When we talk about the virtual world, one thing comes immediately in our mind. Metaverse. Metaverse is virtual world where its users can create digital impressions of themselves and their surroundings just like here in real world. It is replica of real world. It is viewed as exaggerated version of virtual reality.

Metaverse can be accessed with the help of a generalpurpose computer, smartphones, virtual reality headsets or augmented reality glasses.

Metaverse is in continual development. It is considered the next level of the internet. It has no limits or boundaries in terms of space. User can own land inside the metaverse. Buying and selling of virtual land is done in cryptocurrencies such as Ethereum or Sand and MANA. Users can play games with the other users, utilise it for hosting live events, conducting webinars, conducting business meetings and many other things. People can convert any place into their workplace. People can virtually travel at any place available in metaverse.

For creating such interactive virtual world with great visuals and delivering realistic experience, as a developer, he/she requires solid fluency in programming languages like java script, python and swift, excellent skills in 3D modelling, AI technology, VR and AR and needs to be familiar with everything that surrounds the NFTs. As it is in development and with the upcoming technology, We still do not know what shape it will take in Future?

# Opportunities in a Metaverse (Now and in the Future)





### **BRAIN CHIP COMPANY -**



Founded in 2016 by Musk and a group of engineers, Neuralink is building a brain chip interface that can be implanted within the skull, which it says could eventually help disabled patients to move and communicate again, and also restore vision.

Neuralink's device has a chip that processes and transmits neural signals that could be transmitted to devices like a computer or a phone.

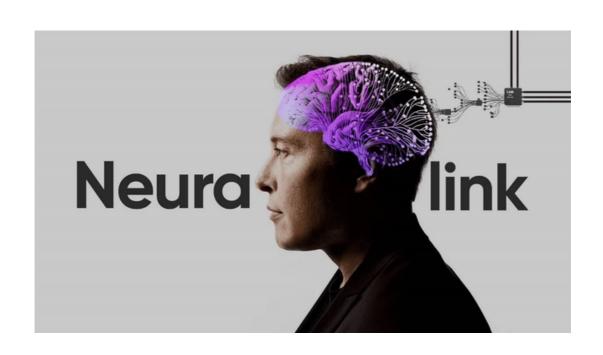
The company hopes that a person would potentially be able to control a mouse, keyboard or other computer functions like text messaging with their thoughts.

"First @Neuralink product will enable someone with paralysis to use a smartphone with their mind faster than someone using thumbs," Musk said in April 2021.

Neuralink also believes its device will eventually be able to restore neural activity inside the body, allowing those with spinal cord injuries to move limbs. The San Francisco and Austin-based company also aspires to cure neurological conditions such as Alzheimer's and dementia

Neuralink has produced several examples of testing aspects of its technology successfully on animals, including a video in 2021 that showed a macaque playing a simple videogame after being implanted with a brain chip. In a presentation webcast last week, the company showcased improvements in the speed and capabilities of the chip.

Neuralink has yet to secure U.S. regulatory approval to move to human trials - unlike competitor Synchron, which has less ambitious goals for its medical advances. Neuralink has missed Musk's publicly stated deadlines to start human trials and this year submitted its application to the Food and Drug Administration to begin them. Musk said last week he believes Neuralink can start human clinical trials in six months.



# **Events**

# NETWORK SECURITY AND CYBER SECURITY

 Network Security and Cybersecurity workshop was by organised CE/IT department collaboration in with SPYDERWAVE Technologies and Mr. Harish Luhar as speakers. More fifty than students attended the workshop and learned different concepts of cyber security.





# START-UP THE BEGINEER'S GUIDE



The event was organised by the SSIP cell, the IIC and Club IDE on 26th August at the CV Raman Hall.

Aaditya Chaturvedi opened the event with a beginner friendly presentation on startup ecosystem followed by an informative speech by Prof. K.K. Acharya of the SSIP cell. It included details about various government schemes to aid the students in their startup ventures.

The entrepreneurs of our college, Sanidhya Patel and Harsh Prajapati, briefed the audience about their own journey of building it up from scratch.

The program was concluded with a short quiz on the aforementioned topics. Students actively participated in the events, utilising the opportunity to the fullest and taking away beneficial career advice.









# Events

### **HACKATHON SENSITIZATION**



Hackathon sansitization was organised under the guidance of Prof. Mahendra Patel sir with winners of SIH Team as speakers. Special thing about this event was students motivated their classmates and other students to actively participate in such kind of events. The whole process from how to participate to how to win the hackathon was explained by the students



## **CAREER GUIDANCE**



A career guidance program was organized by IT Department to motivate students and provide right direction to take step in their career. Respected speakers , Pankaj Mall , Madhukar Rai , Gajendrasinh Rathore were inivited to provide their valuable knowlegle to our beloved students

Pankaj Mall Sir is a motivational speaker has influenced many students to choose right career options. He is also a Swachh Bahrat Warrior and also has a active role in Astitva Foundation. Mahukar Rai sir is an interview expert and subject expert. He is also associated with SPIPA(Sardar Patel Institute of Public Administration). Gajendrasinh Rathore sir has active role in Prajasv Charitable Trust, Bright education and Adics Immigration Consulstancy.

Career guidance is an important step towards any students's future. We are very grateful to them to assist us to build the future of our rising India through their vast knowledge and their valuable piece of time.













#### <u>ALUMNI MEET</u>



The Department of Computer Engineering and Information Technology had organized an alumni meeting for all batches on 1st October 2022 on the Microsoft Team Platform and offline at room no. 5001 CE/IT Department. The entire event was compared and governed by students of the CE/IT department. The meeting started at 11.00 a.m.

Prof. J.S. Dhobi HOD, Department of CE/IT welcomed the gathering and briefed about the importance of alumni meet. The student talked about the Vision, Mission statements of the Institute and the CE/IT Department. Then the student called Prof. P. A. Barot sir. He welcomed all the participants and interacted with alumni.

Expert talks on different topics were delivered by alumni experts. 168+ alumni from all batches, students, and faculties who had worked here participated in the event. Students and staff shared their memories, and most of them volunteered to render services for the benefit of the current students of CE/IT departments. The event was stimulating and enjoyable and simultaneously profitable as all insights came up.

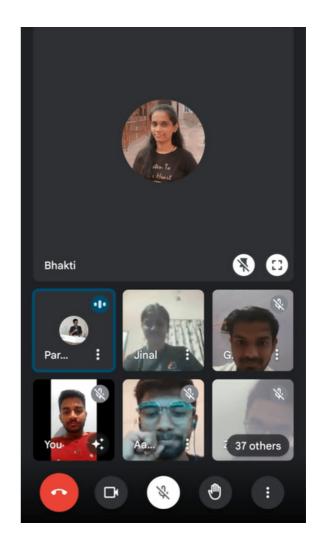
At the end, Prof. D. P. Khem sincerely expressed its gratitude to the Honourable Principal Madam, Activity Head, and Head of CE/IT Department for their guidance and support to make this event a grand success and thanks to Prof. J. S. Dhobi, all Faculties, Staff Members and Alumni for attending Alumni Meet and contributing towards making it such an unforgettable Tuesday.

There were many moments of importance and in a nutshell, it was an extremely successful event where the young freshers could interact with their senior veterans who guided them along the path of success in the most efficient way possible and it was an event, we would look forward to attending next year.

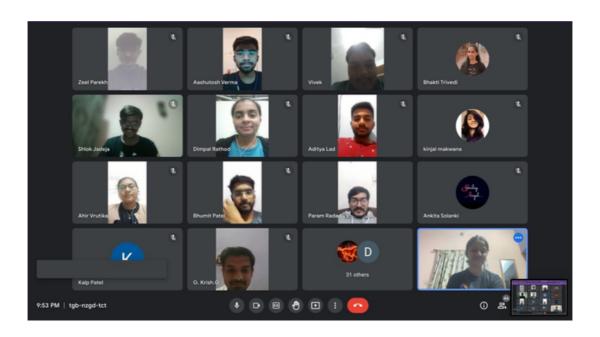


## HOW TO CRACK AND GET INTERNSHIPS AT MNC'S?

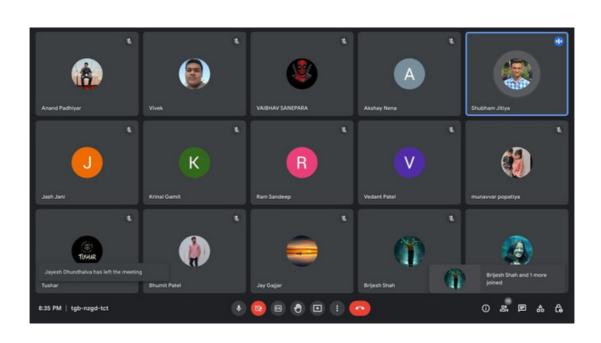
- Bhakti Trivedi, a fourth year student who got accepted for internship at Amazon India, enlightened the students of second and third year about her experience at the same. She discussed the Do's and Don'ts of the interviews along with the learning pathways.
- Various resources were mentioned that can help the students in their She also careers. acknowledged the most preferred languages the tech companies look



today - C and C++, DSA. Fluency in English language and developing communication skills were emphasized to be necessary strengths. Backlogs and CPI's are also said to affect the placements. To conclude the event, she suggested numerous YouTube channels and websites to brush up on their skills.







## ORIENTATION

Orientation is important program to make students aware about the knowledge of their field and course chosen. It helps to shape the future of engineers and contributors of developing economy.









### Placement Gallery Gob

Student Placement guidance and orientation program to motivate and help students to find their dream jobs or career. students were motivated to and guided to build their resumes, work on their professional skills, build networks, and can get hands-on experience of a real world.













#### **Celebrating** our culture

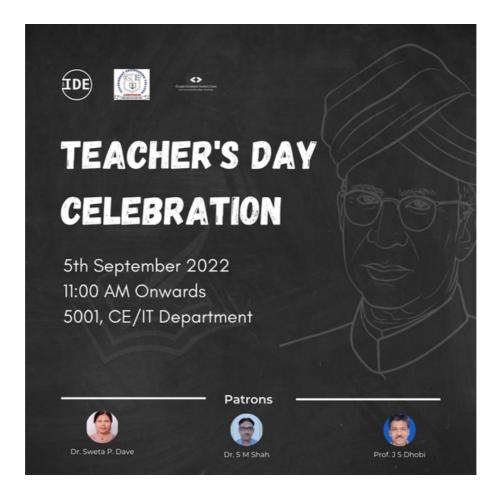
#### INDEPENDENCE DAY

Students of CE/IT department celebrated Independence Day very enthusiastically."Har Ghar Tiranga" Initiative was taken by the students. Flag rally was performed by the students for remembering the martyrs and great freedom fighters of our independence who shed up their blood and gave up their life to set free our country from British Rule.



### Celebrating our culture

#### TEACHER'S DAY



On September 5th, 2022, a celebration was held to honor and recognize the hard work and dedication of teachers. The event was organized by the IT department and was attended by students and teachers of IT department.



The "Teacher's Day Celebration" was a memorable and meaningful event that helped to strengthen the bond between teachers and students and to recognize the important role that teachers play in shaping the future of our young learners.

### Celebrating our culture

#### NAVRATRI CELEBRATION

The festivals and rituals of our country shows its unity in diversity and showcases our love , sacredness, tolerance , brotherhood and respect for each and every religion and culture. Here are the glimpse of Navratri Evening Celebartion





#### 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 student grow their knowledge in a peer-to-peer learning environment and bulid solutions for local businesses and their community.



#### 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.



#### **Head Of Department**



#### **Newsletter Co-ordinator**



**Prof. Manisha Valera**Assitant Professor,CE Department

#### **NEWSLETTER** EDITORS



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# THANK YOU

