



#### **COMPUTER ENGINEERING**

**DEPARTMENT** 



Presenting, 8th issue of half yearly departmental **NEWSLETTER** that consists of events, achievements, moments and much more...

# Published by Computer Engineering Department



#### What is covered in

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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**



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 upgradation of knowledge. Their research experience will help to cultivate the future of our students.

Computer engineering program includes B.E. operations on different languages, data computer 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 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.

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 latest knowledge pertaining to the rapidly developing field of computers. The course is designed to keep students in 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 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

**Dr. Dhaval Parikh** HOD, CE Department





**Prof. J.S.Dhobi** Associate Professor

Dr. Pinal J. Patel
Assistant Professor





Dr. Pratik Barot
Assistant Professor



**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



**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



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 wellmaintained WLAN network, efficiently maintained by our networking genius Prof. Prashant Chaudhari.

## Programming Lab



laboratories The are equipped with a number of desktop computers. The current software resources open-source include 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 the user actions. per Although work with we 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 computers which monitored by a combination hardware special software. The course curriculum provides from the basics coverage of advanced applications services, while providing a platform for hands-on practical experience and softskills enhancement.



#### PG Research Lab



The ability of a computer or other machine to perform those activities that 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 trivial now seen as 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 of Object number a **Programming** Oriented Integrated SDKs, Development Environment like Eclipse, EditPlus etc. Object and Oriented Software Engineering tools.





#### 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 knowledge in a peer-to-peer learning environment and build solutions for businesses and their local communities.





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



https://instagram.com/gdsc\_gecg



https://www.linkedin.com/company/gdsc-gec-gandhinagar



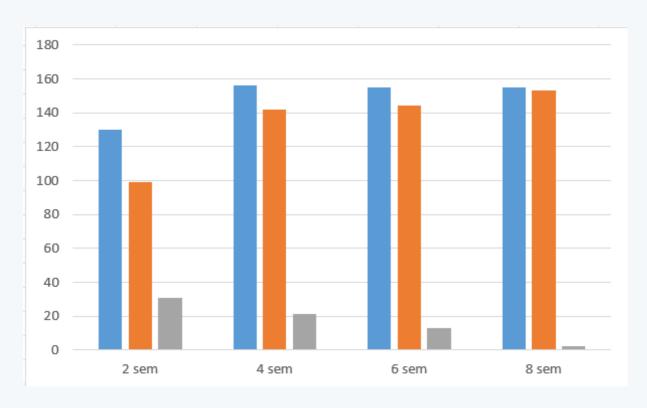
https://youtu.be/snyOV3lqiM8



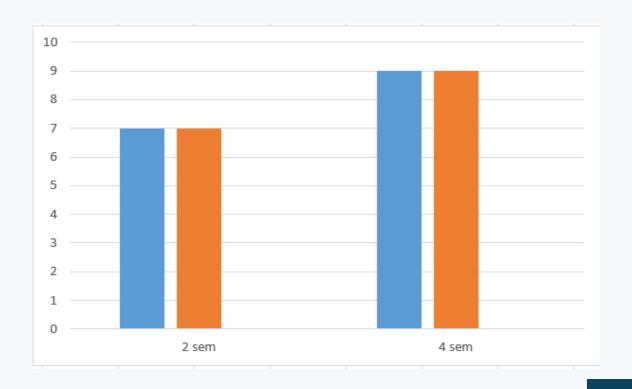
https://twitter.com/gdsc\_gecg

# Result Analysis

#### ✓ B.E. Result for Summer 2023



#### ✓ M.E. Result of Summer 2023



# Placement \*\*\*

In 2023, Students from CE Department are placed in various MNCs likewise Zeus learning, Argusoft, Meditab, Silver touch technologies, Tatvasoft etc.

Highest Package 7.2 LPA Average Package 4 LPA

Companies visited campus this year...













#### • Dr. Dhaval A Parikh

 Dr. Dhaval Parikh published a paper on "Deep Learning Enabled Covid 19 Detection From Chest Xray Images Using Cnn Model" in "Hybrid Conference" in july 14th & 15th.



#### • Dr. Pinal J. Patel

• Dr. Pinal J Patel's research titled "Performance Analysis of Deep Learning Algorithms for Classifying Chronic Obstructive Pulmonary Disease" was published in the international journal JIST. This insightful contribution, featured in volume 12, issue 12(2), on page 745, provides valuable insights into the application of deep learning in COPD classification, and it's indexed by Scopus, enhancing its visibility and credibility in the academic community.



• Dr. Pinal J Patel's research paper titled "Multi-feature Fusion for COPD Classification using Deep Learning Algorithms" was published in the international journal JIST. With a volume of 12 and issue 12(4), the paper spans across page 780, starting from December 18, 2023. Indexed by Scopus, this publication signifies a significant advancement in COPD classification techniques, contributing to the field's ongoing research and development.



#### • Dr. Mihir Mehta

 Dr. Mihir Mehta presented "Creation and Analysis of Multimodal Emotion Recognition Corpus with Indian Actors" at the RTA conference, published in volume 18, issue 3(74), on page 269. The conference took place starting from September 2023. This paper was published in an international journal indexed in Scopus.





• Dr. Hemani Shah



Dr. Namrata Shroff

• Dr. Hemani Shah & Dr. Namrata Shroff authored a review titled "Multimodal Sentiment Analysis using Deep Learning," presented at ASCIS 2023 hosted by Marwadi University. The review, conducted from July 12 to December 9, 2023, and published by Springer, delves into the application of deep learning in sentiment analysis across various modalities, offering valuable insights into this evolving field. Indexed by Scopus, the review adds to the scholarly discourse on sentiment analysis methodologies.





#### • Prof. Manisha Valera

 Prof. Manisha Valera showcased expertise by conducting an expert lecture on "Machine Learning " at GEC Rajkot on 4/11/2023, contributing to knowledge dissemination in the field.



#### Dr. Hemani Shah

 Dr. Hemani Shah Completed Ph.D from PDEU on 20th July, 2023 on the thesis title "Land use / Land cover Classification of Remotely Sensed Data using Machine Learning".





• Prof. Ashwin Prajapati

 Prof. Ashvin Prajapati actively fulfilled the role of SPOC for NPTEL, playing a pivotal part in ensuring successful execution of NPTEL programs and initiatives from July to December 2023.





#### Dr. Pinal J. Patel

- Dr. Pinal J Patel attended a 12-week soft skill development program from July to October 2023 via NPTEL's online platform. The program aimed to enhance participants' soft skills, spanning various topics essential for personal and professional development. This initiative reflects a commitment to continuous learning and skill enhancement facilitated by online platforms like NPTEL.
- Dr. Pinal J Patel participated in a 8-week program titled "Programming, Data Structures, and Algorithms Using Python" from July to September 2023 via NPTEL's online platform. This comprehensive program aimed to equip participants with essential programming skills, data structure knowledge, and algorithmic problem-solving techniques using Python. Hosted online by NPTEL, the program provided accessible learning opportunities for individuals seeking proficiency in Python programming and algorithmic problem-solving.





#### Prof. Yogendra Tank

- Prof. Yogendra Tank attended a 10-day IP1 workshop from December 4 to December 15, 2023, at NITTTR's Ahmedabad Extension Center. The workshop aimed to delve into fundamental aspects of intellectual property, fostering understanding and awareness among participants. Held at NITTTR, this event provided a platform for knowledge exchange and skill development in the domain of intellectual property rights.
- Prof. Yogendra Tank participated in a 12-week Massive Open Online Course (MOOC) on Ethical Hacking from July to October 2023 through NPTEL's online platform. The MOOC aimed to provide participants with comprehensive insights into ethical hacking techniques and cybersecurity principles. Hosted online by NPTEL, this course facilitated accessible learning opportunities for individuals interested in enhancing their cybersecurity skills and knowledge.





#### • Prof. Manisha Valera

 Manisha Valera attended a 5-day STTP on Cyber Threat Intelligence and Digital Forensics from December 9 to December 16, 2023, hosted by GTU. The event aimed to delve into the intricacies of cyber threat intelligence and digital forensics, equipping participants with essential skills and knowledge in cybersecurity. Held at GTU, the program facilitated hands-on learning and knowledge exchange in the rapidly evolving field of cybersecurity and digital forensics.



#### Prof. Bijal Gadhia

 Prof. Bijal Gadhia attended a 12-week "Training of Trainers" MOOC on NPTEL's platform from July to October 2023. The course aimed to enhance participants' training skills, offering effective techniques for aspiring educators or trainers through accessible online learning opportunities.





#### • Prof. Ashwin Prajapati

 Prof. Ashvin Prajapati participated in a 10-day workshop on IP2 from September 11 to September 22, 2023, at NITTTR's Ahmedabad Extension Center. The workshop aimed to delve into advanced aspects of intellectual property rights, fostering deeper understanding and expertise among participants. Held at NITTTR, this event provided a platform for in-depth exploration and discussion on intellectual property laws and practices.



#### Prof. Nitin Raval

 Prof. Nitin Raval attended a 10-day event at NITTTR's Ahmedabad Extension Center from September 11 to September 22, 2023. The event's nature is unspecified, but it likely involves professional development, training, or workshops related to technical education. More details are needed for a precise description of the focus or content.





#### • Dr. Namrata Shroff

• Dr. Namrata Shroff participated in a 12-week Massive Open Online Course (MOOC) on "Training of Trainers" from July to October 2023, facilitated through NPTEL's online platform. The MOOC aimed to equip participants with comprehensive skills and strategies effective training delivery essential for facilitation. Hosted online by NPTEL, this course accessible flexible provided and learning opportunities for individuals seeking to enhance their capabilities as trainers and educators.





• Higher Education Commissioner's Office dt. Pursuant to the letter dated 09/12/2023, to inform that the Bharatiya Vigyan Sammelan-2023 had been organized as a pre-vibrant Gujarat program under the joint initiative of Vigyan Bharti and Gujarat Government from 21st to 24th December, 2023 at Science City, Ahmedabad. than 3000 more scientists/experts/professionals from the field of science and technology were present and 300 stalls displayed under the exhibition. Prof. would be Manisha Valera and Prof. Nrupesh Shah coordinated the event and the students of all the department had visited the event on 24th December, 2023 at Science City, Ahmedabad.

# Student's Achievement



#### Participation in extracurricular activities



Our team has been selected as a finalist for the National Institute of Health (NIH) Grand Finale of the SSIP Hackathon. As second-year students, we are incredibly honored to have reached this stage of the competition, which took place on November 25, 2023, at PDPU, organized by SSIP Gujarat.

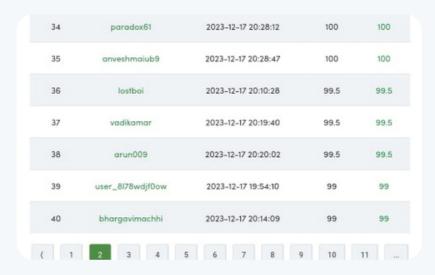
KUBAVAT RISHIT (220130107043) NEHANKHAN PATHAN (220130107107) DIVYESH GANGERA (220130107028) YASH PARMAR (220130107074)

RAJ DHRUVI(220130107114)

AASTHA PATEL (220130107076)

HEMANSHI SOLNKI(220130107132)

JIVANI MIRALI(220130107032)



Geeksforgeeks organised an international contest. There were 3000+ participants, and i got 40th rank by scoring 99/100.

### BHARGVI MACHHI(220130107046)



Chavda Prayag got the certificate for being a top contributor.

### CHAVDA PRAYAG(210130107002)



Kukadiya Aayush got the certificate for being a top contributor.

#### **KUKADIYA AAYUSH(210130107031)**



Dhrumil Shah got 40% marks in E-mail security quiz organised by ministry of electronics & information technology.

**DHRUMIL SHAH(230130107131)** 

ISEX		istry of Elect	Programme b	rmation Techn		InfoSec awareness.in
				rticipation	1	
		Certificate No	o:ISEAN	CSAM/EMLSEC/31106		
This is to	certify that	Mehta	dhyey Samir I	Bhai has	successfully ta	ken part in
the online	quiz on	Email Se	curity	and secured4	. The o	nline quiz is
condi	ucted as part o	f National Cybe	er Security Aware	eness organized by	ISEA Project Ph	ase- II,
progra	amme by Mini	stry of Electroni	cs Information T	echnology (MeitY),	Government o	of India.
					ISEA Project	Coordinator, Management Unit
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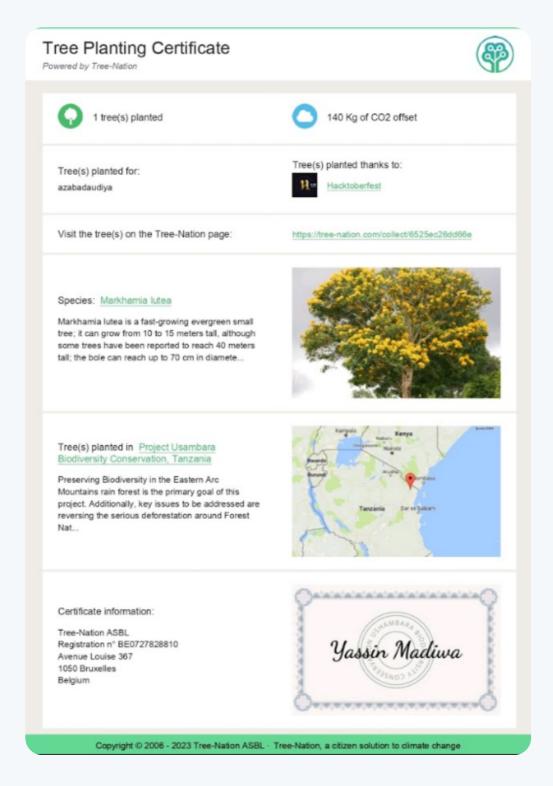
Mehta Dhyey got 46% marks in E-mail security quiz organised by ministry of electronics & information technology.

### MEHTA DHYEY(230130107029)

istà		ry of Electronics	ramme by	tion Technology	ww	foSec areness.in
	(	Certificate O		•		
the online	e quiz on ucted as part of I	Mehta dhyey WhatsApp Securit National Cyber Securit y of Electronics Inform	y Awareness o	d secured 66% organized by ISEA Pr	The online	e quiz is · II,
107 <u>≤</u>					ISEA Coord Project Manager	nazor, meretine

Mehta Dhyey got 66% marks in WhatsApp security quiz organised by ministry of electronics & information technology.

#### MEHTA DHYEY(230130107029)

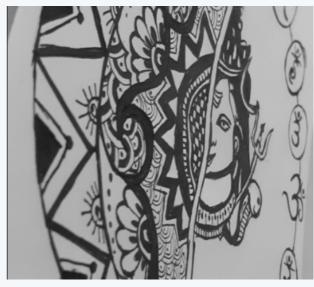


Azaba Daudiya got certification in tree planting

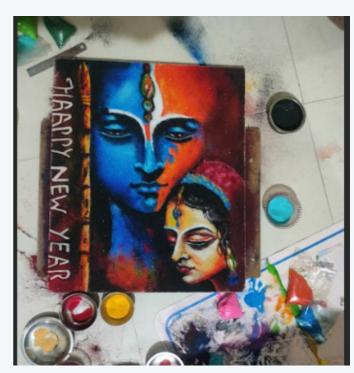
**AZABA DAUDIYA(220133107008)** 

# **Student's Creativity**









# **Tech Updates** S

### July:

- Microsoft has announced the introduction of AIpowered shopping tools in Bing and Edge. These tools aim to enhance the online shopping experience by providing helpful information and recommendations.
- WhatsApp has introduced a new local data transfer method using QR codes. Users can generate a QR code on their old device, which can be scanned by the new device to transfer chat history and account data.
- Facebook owner Meta is launching its new app to rival Twitter and says it will go live on Thursday.
- Musk wants X to be more than Twitter: an "everything app" beyond social media. A new name signifies a fresh start, distancing from past issues and embracing innovation.
- Bloomberg reported in July 2023 that Apple aims to make a "significant Al-related announcement" in 2024.
   This suggests we might hear more about Apple GPT sometime next year.

# Tech Updates 🕏

### **August:**

- Microsoft and PayPal are expanding their partnership to allow Xbox owners in the United States to use Venmo as a payment method for games, movies, TV shows and apps from the Xbox store.
- Controversy: Platforms like Bard and ShortlyAl raise concerns about the potential for Al-powered misinformation and the need for clear source identification.
- Apple's Family Sharing system allows parents to put usage limits on their kids' devices, with one of the key controls being the ability to monitor and limit their usage of specific apps and the device as a whole through a feature called Screen Time.
- Discord.io, a service that allowed users to create custom links for their Discord channels, is closing down following a large data breach.
- California firefighters are using artificial intelligence to help spot wildfires, feeding video from more than 1,000 cameras strategically placed across the state into a machine that alerts first responders when to mobilize.

# **Tech Updates**

### Septmber:

- Microsoft Set To Remove Teams™ From Its 365 Suite Following Investigation
- Apple Wonderlust Event: Apple officially unveiled the iPhone 15 and iPhone 15 Plus, marking the return of the standard size alongside the Pro models.
- Google's Search Bard Launches: The public release of Google's generative language model marks a step towards Al-powered search experiences and raises questions about search engine transparency.
- Government Workers In China Banned From The Use Of iPhones
- ChatGPT Improves And Can Now Browse The Internet
- Will Wikipedia be written by AI? Founder Jimmy Wales is thinking about it
- New Apple iPhone Releases Come With Thunderbolt Charging Ports

# **Tech Updates** 📀

### October:

- OpenAI is in discussions to potentially sell shares, which could increase the company's valuation from \$29 billion to somewhere between \$80 billion and \$90 billion, as reported by The Wall Street Journal.
- a web publishing platform, has decided to block OpenAI's GPTBot, which scrapes web content for training AI models.
- Satellites: The deployment of next- generation Starlink satellites promises faster internet access and improved global coverage.
- Adopted: Leading tech companies and organisations come together to establish ethical guidelines for developing and deploying Al technologies.
- Microsoft is considering a subscription-based model for Windows 12, the next major version of its PC operating system. This potential shift was hinted at in some code found in a new Windows build, suggesting the removal of free upgrades.
- OpenAI is set to see its valuation at \$80 billion making it the third most valuable startup in the world

# **Tech Updates**

### November:

- Google has introduced generative AI product imagery tools for U.S. advertisers, following Amazon's similar move. Through its AI-powered Product Studio, advertisers can create product images by providing text prompts. This AI tool allows for tasks like changing background colors, placing products
- Apple is set to introduce a new paid health service, along with a blood pressure sensor and sleep apnea detection system in the Apple Watch next year.
- SpaceX Starship with Super Heavy Booster launch:
   The second integrated flight test saw the Super Heavy booster explode seconds into the boost backburn. At the same time, the upper stage was lost nearly eight minutes later.
- Sam Altman was removed as CEO of OpenAI: OpenAI's board announced Altman's removal as CEO, citing a lack of consistent candour in his communications with them, but returned as a CEO soon after.
- The Royal Thai Government and Google have joined forces to bolster Thailand's digital competitiveness and drive AI innovation.

# **Tech Updates**

### December:

- Google Weighs Gemini Al Project: The project's aim to create personalised narratives for users using phone data and photos raises ethical concerns and questions about data privacy
- Apple introduces protection to prevent thieves from getting your passwords
- TikTok and GoTo team up in Indonesia, threatening Southeast Asia's e-commerce giant
- EU negotiators reached a historic deal on comprehensive AI regulations, overcoming differences on generative AI and facial recognition use in surveillance
- Nudify' Apps That Use AI to 'Undress' Women in Photos Are Soaring in Popularity
- Telegram Rolls Out New Update; Brings Shareable Chat Folders, Custom Wallpapers, and More.



# Tech Unveiled: A Recap of Cutting-Edge Discoveries



Exploring the Future with the Latest Technological Breakthroughs

#### Introduction

Welcome to the future! As we step into the dynamic landscape of 2023, technology continues to evolve at an unprecedented pace, bringing forth innovations that promise to reshape the way we live, work, and interact. In this blog post, we'll dive into some of the most exciting technological advancements that have emerged in 2023, offering a glimpse into the possibilities that lie ahead.

### **Quantum Computing Leaps:**

Quantum supremacy achieved by leading companies like IBM and Google, showcasing the ability to perform calculations far beyond the reach of classical supercomputers.

These powerful machines leverage the principles of quantum mechanics to perform computations at speeds previously unimaginable.

As researchers harness the potential of quantum algorithms, industries ranging from finance to healthcare are poised to benefit from the immense processing power, solving complex problems in record time.

#### **AI Evolution**

Transformers architecture, exemplified by models like GPT-4 and BERT, continues to dominate natural language processing tasks, pushing the boundaries of language understanding.

Breakthroughs in reinforcement learning contribute to more capable AI agents, impacting fields like robotics and autonomous systems.

Unpack how these developments are reshaping industries such as healthcare, finance, and manufacturing.

#### **Robotic Process Automation (RPA) Enhancements**

RPA technologies evolve with increased adoption of intelligent automation, combining machine learning and AI to handle complex and dynamic tasks.

Integration of RPA in various industries for streamlining business processes, reducing errors, and enhancing operational efficiency. RPA platforms are integrating advanced analytics tools, providing organizations with detailed insights into automation processes. This facilitates continuous improvement by identifying bottlenecks, optimizing workflows, and ensuring compliance.

### **Distributed Cloud Computing**

Distributed cloud computing models gain prominence, allowing organizations to distribute cloud services to various physical locations while maintaining central governance.

Improved scalability, reduced latency, and enhanced data privacy are key benefits of distributed cloud architectures.

#### **Biotechnology Innovations**

CRISPR gene-editing technology continues to advance, with new techniques and ethical considerations shaping the future of genetic modification.

Development of personalized medicine and gene therapies targeting specific genetic disorders.

Artificial intelligence played a significant role in drug discovery processes within biotechnology. Machine learning algorithms analyzed vast datasets to identify potential drug candidates more efficiently, accelerating the drug development pipeline.

#### Conclusion

In conclusion, 2023 marks a pivotal year for technological advancements, with Quantum computing, AI Evolution, Robotic Process Automation (RPA) Enhancements, Distributed Cloud Computing, and Biotechnology Innovations taking center stage. These innovations not only showcase the incredible strides made in various fields but also hint at a future where connectivity, precision, and sustainability harmoniously coexist.

As we embrace these transformative technologies, we stand on the precipice of a new era, where the boundaries of possibility continue to expand, promising a future shaped by innovation and progress.

- Yash Parmar(220130107074)

## Departmental Activities (1)











On October 21, 2023, an alumni meet was organized. CE & IT department, attended by esteemed figures including the Head of Department, Dr. Dhaval Parikh, and Dr. J.S. Dhobi, along with alumni and numerous current students. The event proved to be a vibrant and insightful gathering, fostering meaningful interactions between past and present members of the college community. Discussions ranged from career paths to technological advancements, creating conducive environment for networking and knowledge exchange. Overall, the event was a resounding success, leaving participants inspired and connected.



### **Engineers' Day**



On September 15th, we celebrated Engineers' Day with gusto, featuring an array of engaging activities. From an exhilarating treasure hunt to uproarious stand-up comedy performances, and insightful sessions, the event was a perfect blend of fun and learning, fostering camaraderie and celebrating the innovative spirit of engineering.







## **CP Bootcamp**



GDSC-GECG is organized a CP Bootcamp. Getting started with the Info session we provided a breif information about the program and some basic knowledge about CP and it's importans







### **DBMS**



The Advanced DBMS expert lecture by Mihir Seth on November 6th was a dynamic and interactive session, enriching attendees with profound insights. Seth's expertise illuminated complex concepts, fostering lively discussions and enhancing understanding. It was a compelling opportunity for deepening knowledge and leveraging expertise in the field.





### Hectoberfest



IDE Club orchestrated an introductory session on Hacktoberfest, immersing participants in the essence of open-source contribution. Engaging discussions, hands-on activities, and valuable insights characterized the event, igniting enthusiasm for collaborative coding endeavors. It served as a gateway for enthusiasts to delve into the world of meaningful software development contributions.

### **Head of the Department**



Dr. Dhaval Parikh Head of C.E. Department

### **Newsletter Coordinator**

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