

VOL. 1



NEWSLETTER

# TECHIEEPPRENEUR

« « TIMES OF GTBIT » »



PASSION FOR INNOVATION,  
DREAMS FOR THE FUTURE

# ABOUT GTBIT

Guru Tegh Bahadur Institute of Technology (GTBIT), affiliated with Guru Gobind Singh Indraprastha University, is committed to advancing technical knowledge and promoting innovation. GTBIT provides an environment where students develop the skills needed for modern engineering demands. Through a blend of academic excellence and hands-on experience, GTBIT empowers students to become future leaders in the field of technology.

## PATRONS



**S. Harmeet Singh Kalka**  
President (DSGMC)



**S. Jagdip Singh Kahlon**  
General Secretary  
(DSGMC)



**S. Amarjit Singh**  
Chairman (GTBIT)



**S. Harjeet Singh**  
Manager (GTBIT)



**Dr. Rominder Kaur Randhawa**  
Director (GTBIT)



# IEEE GTBIT SB



Established in **2008**, **IEEE GTBIT** is a student branch at **Guru Tegh Bahadur Institute of Technology** that enhances the engineering experience. It focuses on a wide assortment of topics relevant to daily technological needs even extending into non-technological fields. The environment **fosters collaboration among great minds**, supported by **abundant resources** and **mentorship**. By promoting hands-on learning, innovation, and problem-solving, IEEE GTBIT SB encourages research projects and networking opportunities while seamlessly integrating **career development** through internships and job placements.



**Mr. Mukesh Sahu**  
BRANCH COUNSELOR  
IEEE GTBIT SB

Mukesh Sahu, **IEEE GTBIT SB Branch Counselor**, is a dedicated advisor who provides guidance on both technical and professional levels.

His expertise helps students navigate IEEE's resources, organize impactful events, and develop skills relevant to the industry. His involvement ensures that IEEE GTBIT SB is a productive platform for learning and technical exploration.



**Sahib Preet Singh**  
CHAIRPERSON  
IEEE GTBIT SB

Sahib Preet Singh, **Chairperson** of the **IEEE GTBIT Student Branch**, guides the branch's technical endeavors and cultivates a strong sense of community among its members.

He actively encourages innovation and skill development through collaborative projects and workshops.

# TSG GTBIT



Founded in August 2002, the **Technical Society of GTBIT (TSG)** is dedicated to **cultivating scientific talent** and fostering a passion for technology among students. TSG provides a collaborative environment for students to explore and expand their technical skills across various fields of engineering.

Through workshops, projects, and hands-on learning, TSG encourages young tech enthusiasts to innovate and excel, empowering them with the knowledge to make impactful contributions to the world of technology.

# IIPC GTBIT



**The Industry Institute Partnership Cell (IIPC)** at GTBIT connects students with the professional world by **fostering strong industry ties**. Through workshops, internships, and expert talks, IIPC helps students gain practical skills and aligns academic learning with industry needs.

IIPC bridges the gap between theoretical education and industry expectations. By offering specialized training programs and exposing students to current industry trends, IIPC prepares them to meet the demands of the ever-evolving job market, paving the way for successful careers.



# EXECUTIVE COMMITTEE

The **IEEE GTBIT Student Branch Executive Committee (Execomm)** is structured with essential roles including **Chairperson, Vice Chairperson, Treasurer, General Secretary, and Technical Secretary**, representing the student branch under the IEEE Delhi Section. It is organized into technical teams focused on Web Development, Internet of Things, Data Structures and Algorithms, and Machine Learning, while non-technical roles encompass Human Resources, Graphic Design, Editorial, Network and Social Media, and Photography.



- The **IEEE GTBIT WIE Affinity Group** empowers women in STEM through mentorship, networking, and professional development, hosting events and workshops on women's empowerment and engineering topics.
- Aimed at **bridging gender gaps** and inspiring future engineers, its initiatives are inclusive, supporting all interested in **advancing women in STEM**.



- The **IEEE GTBIT Computer Society Chapter** promotes computer science and engineering through events on emerging technology.
- It offers workshops to strengthen technical knowledge and problem-solving skills.

# SIGs





# ACHIEVEMENTS

## HACKATHONS



- A team of four, including **Aryan Bains**, **Prabhjot Singh**, **Prableen Singh**, and **Sahib Preet Singh**, secured the **runner-up position** at **Vihaan DTU007**, winning the cash prize of 45 thousand rupees.
- At **ZImetrics** Binal Singh, Sahib Preet Singh and the team **won Zeemerquest 23**, acquiring 1 Lakh rupees.
- A team composed of **Angaddeep Singh**, **Falkeet Singh** and **Gurasees Singh** won the first position in **Designathon** on IEEE Day 2023.
- A team of four, including **Falkeet Singh**, **Angaddeep Singh**, **Navjyot Kaur** and **Devanshi Singh** stood as the **finalists in HackQuest**, a hackathon organized by **IEEE Delhi Section** comprising 8 states.



- A team of four, composed of **Falkeet Singh**, **Navjyot Kaur**, **Gurnoor Kaur** and **Mansimar Kaur** won the **second position** in **Vegathon**, a hardware hackathon organized by **IEEE GTBIT SB**.
- **Navjyot Kaur** won in **Tech in Tambola Showpiece** on **IEEE Day 2024**.
- A team composed of **Falkeet Singh**, **Angaddeep Singh** and **Rhea Singhal** won in **Tech Track Relay** on **IEEE Day 2024** at **DTU**.
- **Angaddeep Singh** qualified in the **top 10** teams in **ILUX** event at **Invictus DTU**.



- **Falkeet Singh** and **Angaddeep Singh** won the **Emerging Student Volunteer Award** by IEEE GTBIT SB.
- **Navjyot Kaur** won the **Outstanding WIE Volunteer Award** by IEEE GTBIT SB.
- **Gurasees Singh** won the **Best Event Manager Award** on IEEE Day 2024.
- **Angaddeep Singh** was chosen as the only volunteer from GTBIT for the **International Leadership Summit** organized by **IEEE Delhi Section Women in Engineering Affinity Group**.
- **Falkeet Singh, Harjas Singh, Ishika Ahuja, Sneha Singh, Simar Kaur** and **Angaddeep Singh** were the Ace Performers for the month of May.
- **Gagandeep Kaur, Supret RJ Kaur, Navjyot Kaur** and **Gurasees Singh** were the Ace Performers for the month of September.
- A team composed of **Ishika Ahuja, Supret RJ Kaur** and **Divya Rehat Singh Kohli** won in **Tech Track Relay** on **IEEE Day 2024** at DTU.
- **Gursimar Kaur, Prabhleen Kaur, Tanu Jha, Avneet Kaur** won the award of **Best WIE Team** at **Vihaan DTU 6.0**.
- **Bhavika** secured the 1st position in a public speaking contest **“Goonj”** organized by **IEEE BPIT WIE AG**.
- **Devanshi Sharma, Gursimar Kaur Sodhi** and **Gurnoor Kaur Bindra** won the award of **Best WIE Team** at **Empow’Her’ IIITD**.



Joining the IEEE society at GTBIT last year has been a great experience for me. This technical society offers many chances to learn and grow. Through IEEE, I took part in several hackathons, including the IC Hackathon at Manipal University, Jaipur. I was proud to represent GTBIT and enjoyed the exciting atmosphere while learning valuable skills from other participants.

By Kashish Chauhan



# INTERNSHIPS

- Vidit Dalmia: peaks2tails
- Vinay Dhaka: DRDO
- Kulreet Kaur: Samsung Innovation Campus (3-month training)
- Yash Pandey: Samishti Infotech Pvt Ltd
- Ashnoor Singh: To-let globe
- Dhairyajeet Singh: Uno Minda Limited
- Harmanjot Singh Nanda: National Capital Region Transport Corporation
- Gurnoor Kaur: Medoc IT Health Pvt Ltd
- Shubh Goel: Airports Authority of India at IGI New Delhi
- Sahib Preet Singh : LYBL (Live Your Best Life)



Samsung  
Innovation Campus



# PLACEMENT RECORD OF IEEE GTBIT MEMBERS



Jyotika  
Israni



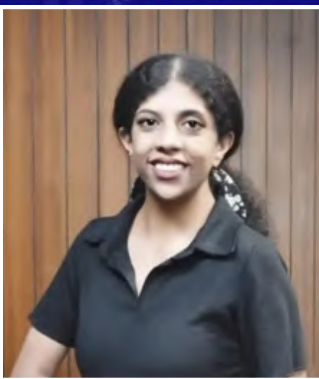
Mohan  
Kaushik



Mrigya  
Reineu



Rohan Kumar  
Singh



Sneha  
Soniwal



Amrit  
Gaur



Binal  
Singh



Devanshi  
Sharma





# IEEE GTBIT SB IN IEEE DELHI SECTION



We are thrilled to announce the selection of

**Sahib Preet Singh** as the **Mentor**

**Japjot Singh** in **Industrial Collaboration and Outreach Committee**

**Falkeet Singh** in **Editorial Committee**

**Angaddeep Singh** in **Graphic Designing Committee**

**Gurnoor Kaur** in **Networking and Technical Activities Committee**

in **IEEE Delhi SSN** for the tenure **2024-25**.

## IEEE DELHI SECTION AWARDS CEREMONY 2024 — (26 May 2024) —



### Student Network Award

Prabhjot Singh, Sahib Preet Singh, and Sneha Soniwal

### Outstanding WIE Student Volunteer Award

Bhavika, Diya Sehgal, and Gursimar Kaur Sodhi

### Outstanding Student Volunteer Award

Aryan Bains, Prableen Singh, and Yash Pandey

### JK Pal Memorial Award

Binal Singh, Mohan Kaushik, and Rohan Singh





# STARTUPS

## NeuroSense

**Founders: Sahib Preet Singh and Binal Singh**  
**Year : 2023**

**NeuroSense**, is a startup focused on **personalized mental well-being** through **advanced brain wave analysis**. Selected for pre-incubation at the **Atal Incubation Center**, our team has developed a **machine learning-powered wearable headband** that detects and interprets brain wave patterns to assess stress levels. This provides real-time insights into an individual's mental state, offering a personalized and efficient approach to stress monitoring.



**Founders - Rohan Singh and Prabhjot Singh**  
**Year : 2023**



## ProjectForge

Our startup **ProjectForge** specializes in designing **innovative IoT** and **software projects** tailored for B.Tech students. With projects like a path-tracking car and a smart lock system developed by Rohan Kumar Singh with our team, we offer unique, hands-on solutions that foster practical skills and enhance knowledge through personalized support and expert guidance.

## Innovative Shelf

**Founders: Aryan Bains**  
**Year : 2023**

**Delivering high-quality tech products that enhance everyday life.** Founded in 2023 by **Aryan Bains**, **Innovative Shelf** specializes in curating innovative technology solutions designed to inspire creativity and simplify routine tasks. With a commitment to quality and convenience, the company has quickly established itself as a leader in the tech retail space

**Website:** [innovativeshelf.com](https://innovativeshelf.com)





# ESSENTIAL DEVELOPMENT BOARDS FOR IOT, ROBOTICS, AND EMBEDDED SYSTEMS INNOVATION

In the fast-evolving fields of embedded systems, IoT, and robotics, development boards are essential for enthusiasts and professionals. These platforms enable quick prototyping and hands-on experimentation.

**Arduino:** Launched in 2005, Arduino makes electronics accessible to all. The Arduino IDE was introduced in 2006, empowering users to create everything from basic circuits to interactive projects.

**Raspberry Pi:** Introduced in February 2012, Raspberry Pi promotes computer science education. The release of the Raspberry Pi 4 Model B in June 2019 enhanced its performance for applications like media centres and IoT solutions.

**ESP32:** Released in September 2016, the ESP32 features built-in Wi-Fi and Bluetooth, making it ideal for smart home devices and IoT applications. Its ESP-IDF framework supports seamless development of connected solutions.

These development boards bridge the gap between ideas and implementation, helping in bringing innovative concepts to life through hands-on experimentation.



- By Navjyot Kaur

# Bootcamps Organized

Date: April- August 2024

“ The WebDev Bootcamp was an incredible experience! We explored HTML, CSS, and JavaScript through hands-on practice. By the end, we each created a responsive portfolio to showcase our new skills.

-Supret RJ Kaur

- IEEE GTBIT SB hosts **annual bootcamps for IEEE members**, blending essential soft and technical skills in areas like **Web & App Development, IoT, Graphic Design, DSA, and AIML**
- Running from **April to August**, this year's sessions attracted **over 50 students** and were **led by IEEE GTBIT SB members** skilled in their fields
- These bootcamps empower students with **hands-on experience** and insights to prepare for tech-driven careers in fast-evolving industries.



“ I recently attended an IoT bootcamp by IEEE GTBIT, where I learned about sensor technology and Arduino Uno. My final project—a home security system—consolidated my skills. I highly recommend this bootcamp!

-Arnav Sharma



# VEGA WORKSHOP and VEGATHON

Date: 25-27 April 2024



- IEEE GTBIT SB, with IIPC-GTBIT and IT/ECE, hosted Vegathon, a 24-hour Vega processors hackathon on April 26-27 for 100+ participants.
- Teams developed solutions in safety, monitoring, and health tech, including an IV monitor and health smartwatch.

- IEEE GTBIT SB, with IIPC-GTBIT and IT/ECE departments, hosted a Vega processors workshop on April 25-26 for 130+ participants.
- Participants explored sensors like LDR, RFID, and IR for applications in automatic lighting and motion detection. .



# MINI APOGEE

IN COLLABORATION WITH **BITS PILANI**

Date: 22-23 March 2024



## PIXEL PERFECT : UI/UX DESIGNING

- IEEE GTBIT SB and BITS Pilani held a 48-hour UI/UX design event using Figma and Adobe XD.
- Participants recreated designs to practice pixel-perfect accuracy.



## CASE STUDY COMPETITION

- This 24-hour competition challenged participants to analyze risks and make strategic market entry decisions.
- Teams created solution decks in .pptx format, applying analytical and strategic skills.



## MOBILE PHOTOGRAPHY

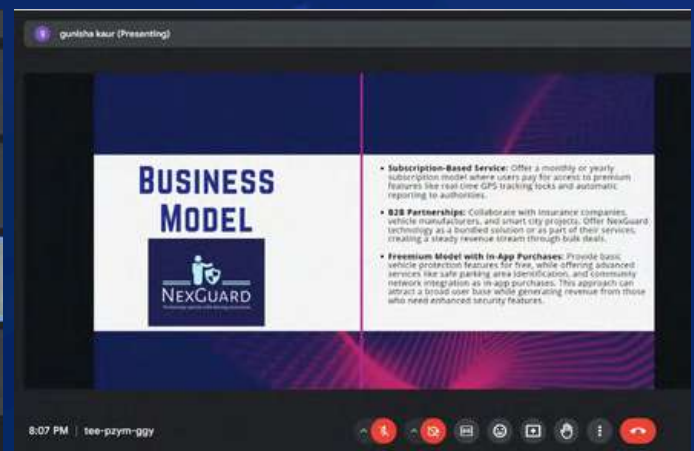
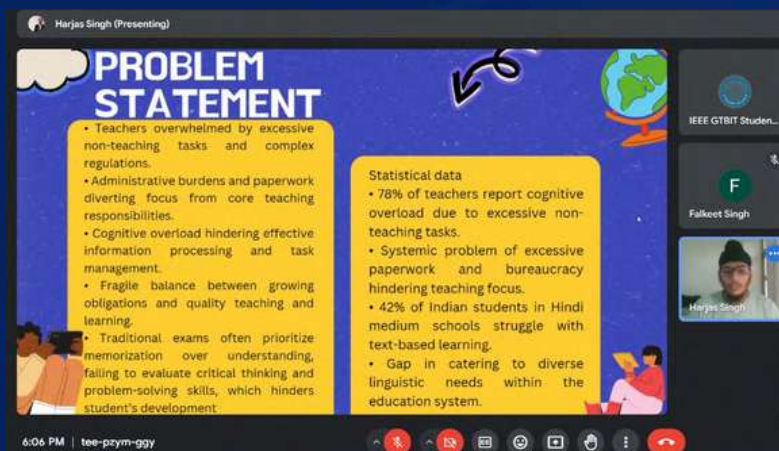
- Participants captured campus life for a chance to be featured in APOGEE's fest magazine.
- The event showcased their creativity and technical skills.



# INNOSPHERE IDEATHON

Date: 13 August 2024

In an innovative move to foster collaboration and team spirit, HackGTBIT Special Interest Group (SIG) under IEEE GTBIT Student Branch along with TSG organized "Innosphere," an internal ideathon exclusively for the executive committee members. The event aimed to strengthen team bonding while challenging participants to brainstorm and develop creative solutions for real-world problems.



## QUIZEDIA 3.0

Date: 19 July 2024

IEEE GTBIT SB organized an engaging quiz session, Quizedia, focused on Virtual Reality (VR) knowledge and Artificial Intelligence. Designed to spark curiosity and enhance technical knowledge, the event saw active participation from students, fostering a vibrant learning environment.



# JUNIOR VOLUNTEERS PROGRAM

Date: 24 October 2024

The IEEE GTBIT Student Branch proudly launched its Junior Volunteer Program, aimed at nurturing new talent. From over 100 applicants, 41 outstanding candidates were selected through a thorough interview process.

These junior volunteers will receive training in essential technical and soft skills, preparing them for future endeavors. This program reflects IEEE GTBIT's commitment to empowering members, ensuring they are equipped to make meaningful contributions within IEEE and in their professional careers.



IEEE GTBIT SB held an insightful session on **Overview of DSA** for selected junior volunteers, led by Yash Pandey. The session covered essential topics, from key DSA concepts to practical tips for consistency, with valuable resources shared to support ongoing learning.

Date: 3rd November 2024



# IEEE DAY 2024



Date: 14-16 October 2024

## DREAM FORGE



- A thrilling sci-fi competition celebrated creativity and innovation, challenging participants to devise groundbreaking ideas for future lifestyles.
- The event included an online quiz and offline presentations.
- Teams had two hours to prepare and pitch their visionary concepts.

## TINKERCASE 2.0



- TinkerCase 2.0 – second edition of the Hardware Showcase competition
- IEEE DTU in collaboration with IEEE GTBIT
- Teams build hardware projects like Line Following Robots and Attendance Monitoring systems using Arduino boards



## TECHTRACK RELAY

- TechTrack Relay – a blend of technical challenges and teamwork in a lemon-race format
- Teams of three; each member advances only after teammates answer rounds of technical questions
- Dynamic relay race where the final member races to the finish after completing all question rounds

## MIST

- MIST – IEEE DTU's annual cryptic hunt, themed around chess for IEEE Day 2024
- Began October 14th at 6 PM IST, lasting 24 hours with over 20 cryptic levels increasing in difficulty
- Individual competition focused on problem-solving skills



## CODE IN THE DARK

- Three levels – easy, medium, and hard
- Participants received code snippets and chose from four programming languages
- Random language assignments with complex challenges, emphasizing accuracy and speed



## KNIGHT'S DUEL

- Chess tournament held on IEEE Day
- Chess enthusiasts from diverse backgrounds
- Showcase of skills, strategy, and sportsmanship in competitive matches



## DESIGNER DEAL ARENA

- Round 1 : Teams (60 total) created ads for assigned products, branding them with IEEE using a design app within 1 hour and 15 minutes; 18 teams advanced
- Round 2 : Selected teams prepared a presentation within 1 hour and 15 minutes for the pitching round
- Judging Criteria : Originality and creativity of design, pitch effectiveness, and presentation quality



## TECH IN TAMBOLA

- Tambola with a technical twist, ticket numbers replaced by answers to 15 fundamental tech questions
- Many participants across three rounds, each with 25 unique tickets, 20 tech questions posed during each round
- Complete a row (top, middle, or bottom), three winners per round, totaling nine winners



## SPEAKER SESSION

- Offline stress management session hosted by IEEE GTBIT SB, led by Life Coach Swaran Singh Jaggi
- Interactive discussions on mindfulness, time management, and self-care practices
- Encouraged participants to adopt healthier stress management techniques for improved well-being

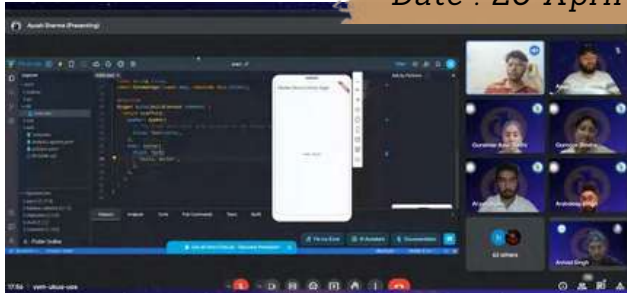




# SPEAKER SESSIONS

## Flutter : For App Development

Date : 20 April 2024



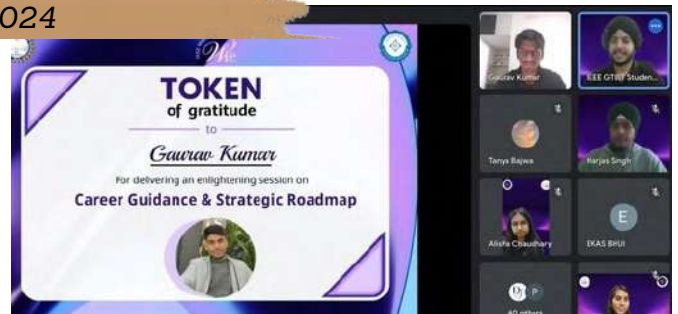
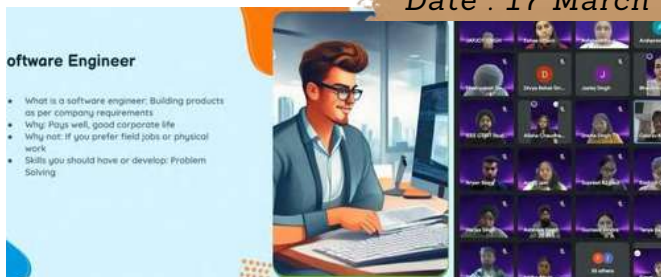
## Generative AI

Date : 20 July 2024



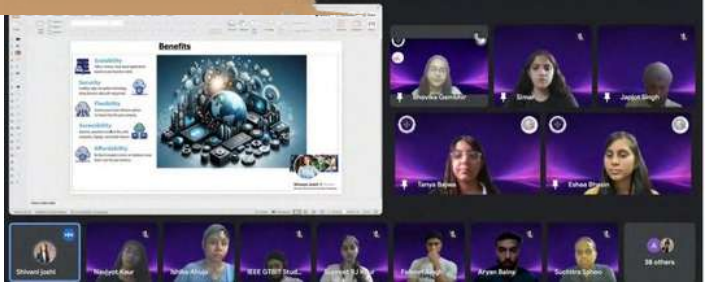
## Discovering Your Path: Career Guidance and Strategic Roadmap

Date : 17 March 2024



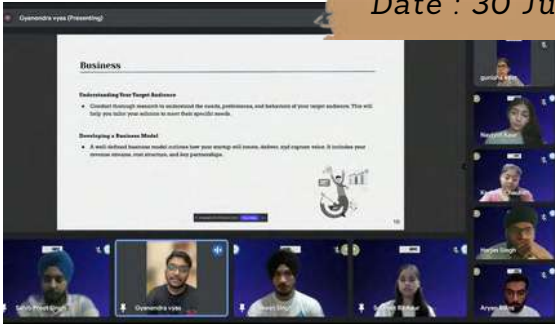
## Cloud Computing

Date : 10 July 2024



## Roadmap To Start A Startup

Date : 30 July 2024



## Art Of Research Writing : From Ideas To Publication

Date : 25 August 2024



## Master Python for FPGA and VLSI/Embedded Systems to enter Semiconductor Industry

Date : 17 September 2024





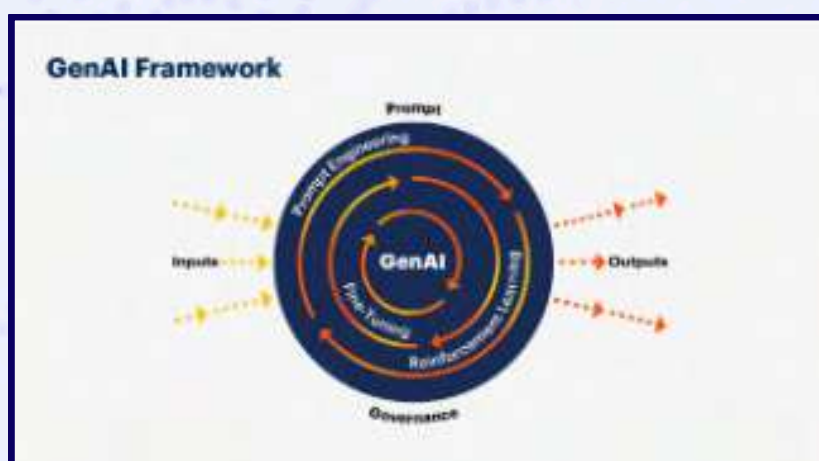
# GENERATIVE AI: REVOLUTIONIZING CONTENT CREATION AND DEVELOPMENT WITH TRANSFORMER TECHNOLOGY

Generative AI (GenAI), first popularized around 2017 with the introduction of OpenAI's transformer models, is transforming industries by creating new content—like text, images, and code—based on data patterns. Unlike traditional AI, GenAI autonomously generates complex outputs, making it valuable across technical and professional fields.

GenAI accelerates development by generating real-time code snippets and assisting in debugging, seen in tools like GitHub Copilot.

OpenAI, a leading AI research organization, develops advanced AI tools to make artificial intelligence safe and accessible. One of their key innovations is "transformers," a type of AI model architecture. Transformers excel at processing large datasets, allowing AI to understand and generate human-like text, images, or even code. This efficiency makes them powerful for tasks like language translation, content generation, and code assistance. OpenAI's transformer models, like GPT which was launched in 2018, handles large datasets efficiently, enabling applications in language translation, content creation, and more.

- By Devanshi Singh





# FUN TRIPS

## CHANDIGARH UNIVERSITY

IEEE GTBIT SB at **Chandigarh University** participated in **IEEE CSIS 2023**, themed "Embracing the AI Revolution." The event featured a range of engaging sessions, discussions, insightful workshops and a cultural evening, providing valuable opportunities for learning and networking.



## NSUT

IEEE GTBIT SB had a vibrant presence at the **DSSYWLC at NSUT**, gaining insights through workshops, networking, and collaboration. This event enriched our team with new ideas to drive innovation and growth within our student branch.



Date: 29 August 2024

# Jashn-e-freshers



IEEE GTBIT SB made a vibrant presence at this year's Jashn-E-Freshers with a variety of exciting activities. Our game stalls, including Glass Pong, Mystery Sense, Secret Swap, Bottle Hold-Off, and the popular Newspaper Dance, fostered friendly competition and filled the atmosphere with laughter. Additionally, we hosted an engaging orientation to introduce freshers to IEEE GTBIT SB, igniting curiosity and enthusiasm. Jashn-E-Freshers was the perfect kickoff for an incredible year ahead!



## Meet and Greet

Date: 23 September 2024



IEEE GTBIT SB hosted a meet-and-greet for freshers to introduce them to the organization's vision and membership benefits. The event attracted many students eager to learn. Our Chairperson discussed career development resources, networking opportunities, and programs designed for students, including mentored bootcamps and hackathons. The session fostered an open and inclusive atmosphere, encouraging students to ask questions and explore their passions within the IEEE community while considering their roles in future initiatives.



# Award Ceremony

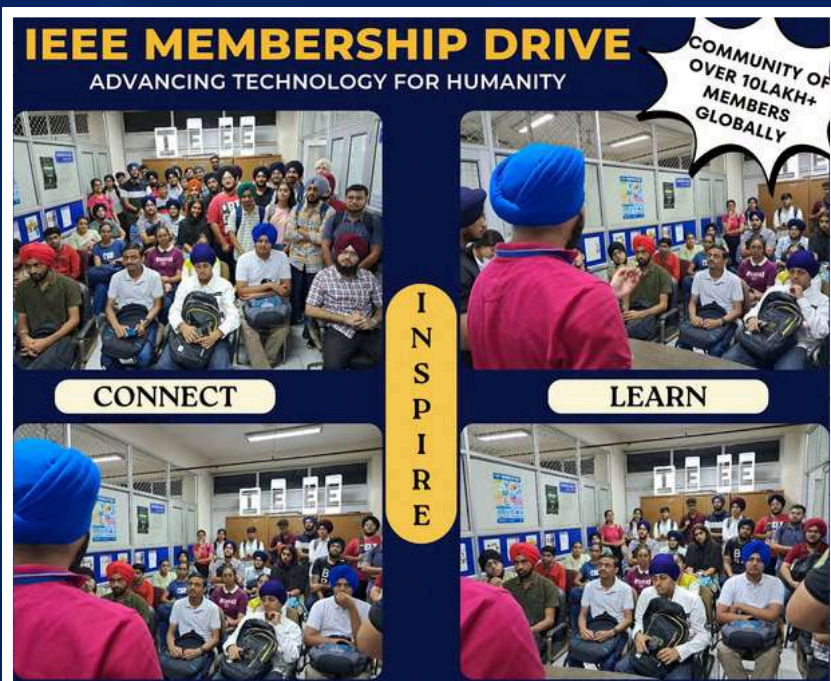


IEEE GTBIT SB hosted an award ceremony to celebrate the achievements of its executive members in various fields, including technical innovation and community leadership.

Awards were given in four categories: Outstanding WIE Volunteer, Best Student Volunteer, Emerging Volunteer, and Outstanding Volunteer, recognizing individuals for their valuable contributions to the IEEE community.



# Membership Drive



The IEEE Membership Drive aimed to introduce students to the benefits of joining one of the world's largest professional organizations dedicated to advancing technology. We highlighted the numerous opportunities and resources available to members, resulting in **153 new memberships and expanding our IEEE family to over 320 active participants**. This drive successfully fostered community spirit, encouraged student involvement, and strengthened our branch's network, making us the most vibrant technical society on campus.



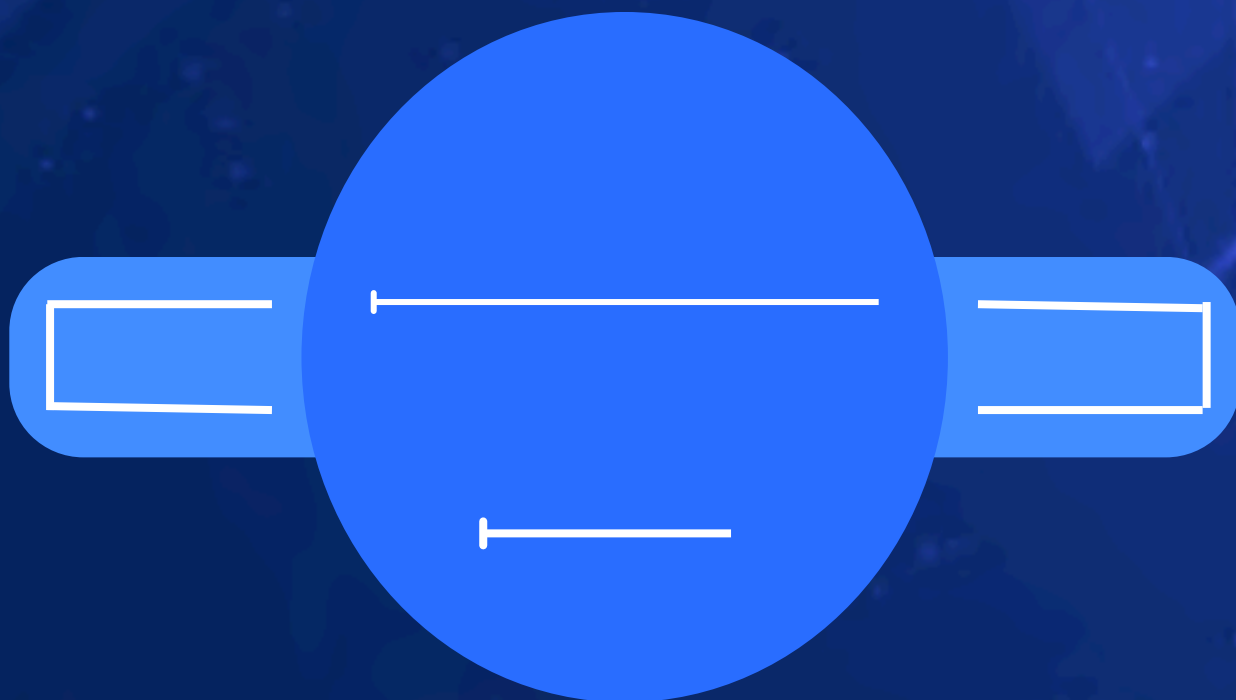
# MEET THE TEAM

## BEHIND THE NEWSLETTER

**This edition of our IEEE GTBIT newsletter is the result of hard work, creativity, and dedication from our talented team members:**

NAME	BRANCH	YEAR
Alisha Chaudhary	CSE	2nd Year
Angaddeep Singh	CSE	2nd Year
Devanshi Singh	IT	2nd Year
Dhairyajeet Singh	CSE	2nd Year
Divya Rehat Singh Kohli	CSE	2nd Year
Falkeet Singh	CSE	2nd Year
Gagandeep Kaur	CSE	2nd Year
Gunisha Kaur	CSE	2nd Year
Gurasees Singh	CSE	2nd Year
Harjas Singh	CSE	2nd Year
Ishika Ahuja	CSE	2nd Year
Kulreet Kaur	CSE	3rd Year
Navjyot Kaur	IT	2nd Year
Paras Nagshetty	AIDS	3rd Year
Sneha Singh	IT	2nd Year
Supret RJ Kaur	CSE	2nd Year

**Their collaborative spirit and commitment have crafted a newsletter that truly celebrates our journey and milestones as an IEEE GTBIT community.**



As we conclude this edition, we reflect on a year filled with inspiring achievements, enriching events, and the relentless spirit of our members. Each event, project, and milestone has added to the vibrant spirit of IEEE GTBIT SB, IIPC GTBIT and TSG and helped us towards our goal of collective technical brilliance, pushing the boundaries of what we can accomplish together. We extend our heartfelt gratitude to every contributor, organizer, and participant who made this journey remarkable.

**Thank you for being a  
part of IEEE GTBIT SB.**



# **FUTURE ASPIRATIONS**

**As we look ahead, IEEE GTBIT, TSG, and IIPC GTBIT are united in our vision to create a thriving ecosystem where technology, innovation, and entrepreneurship intersect. IEEE GTBIT, the largest technical society at GTBIT, remains dedicated to its motto, "Advancing Technology for Humanity," by fostering innovation through impactful projects and collaborations. TSG will continue to drive technical growth, hosting expert-led sessions and workshops to deepen students' practical skills and industry knowledge. IIPC GTBIT aims to empower entrepreneurial minds, offering resources and mentorship for startup ideas and entrepreneurial ventures.**

# ADVANCING TECHNOLOGY FOR HUMANITY



CONTACT US TODAY ON :-

Mr. Mukesh Sahu (Branch Counsellor, IEEE - GTBIT) : +91 9212425434

Sahib Preet Singh (Chairperson, IEEE - GTBIT) : +91 971877991

Yash Pandey ( Vice Chairperson, IEEE-GTBIT): +91 7428937755