



IEEE GTBIT

ISSUE - 3

2024 - 2025

IEEE
TECHNICAL

ABOVE THE
ORDINARY

BEYOND THE
EXTRAORDINARY

ADVANCING
FOR

TECHNOLOGY
HUMANITY

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WORDS FROM CHAIRMAN

IEEE GTBIT SB has consistently demonstrated a commitment to advancing innovation, excellence, and collaboration in the field of technology. Your initiatives, events, and projects not only contribute to the academic growth of our students but also enhance their practical skills and knowledge.



S. AMARJEET SINGH JI

I applaud your efforts in organising workshops, seminars, and competitions that provide a platform for students to exchange ideas, learn from experts, and showcase their talents. Your contributions to the technological advancement of our college and community are truly commendable.

WORDS FROM MANAGER

IEEE GTBIT SB has consistently showcased its dedication to nurturing innovation and excellence within its members. At GTBIT, we understand the importance of staying ahead in the rapidly evolving field of technology. That's why we strive to create a dynamic and supportive environment where students can thrive and realise their full potential.



S. HARJEET SINGH JI

I truly commend your dedication to organizing workshops, seminars, and competitions that offer students a valuable platform to exchange ideas, gain insights from experts, and showcase their talents. Your remarkable contributions have significantly advanced the technological development of our college and community.

WORDS FROM DIRECTOR

In the bustling corridors of our college, IEEE GTBIT SB stands as a beacon of innovation and opportunity, enriching the academic journey of students and contributing positively to our institution's growth. IEEE GTBIT cultivates a culture of collaboration and teamwork, where students from diverse backgrounds come together to work on projects, share ideas, and inspire one another.

This collaborative spirit not only strengthens the bonds within our college community but also cultivates essential skills like communication, leadership, and problem-solving.

Beyond the confines of our campus, IEEE GTBIT SB opens doors to a vast network of industry professionals and experts, offering students access to internships, mentorship programs, and career opportunities.

My heartfelt wishes go out to IEEE GTBIT. I Hope you continue to inspire and empower students, fostering a culture of excellence and growth.



**DR. ROMINDER KAUR
RANDHAWA**

FROM THE DESK OF BRANCH COUNSELLOR

IEEE GTBIT SB has been helping students thrive in professional work environments for years. As the branch counselor of IEEE GTBIT, it gives me immense pleasure and satisfaction as a teacher to witness their growth and achievements.

The students associated with our branch value; ethics, honesty, and truthful learning. Over the years, we have expanded by introducing separate CS and WIE chapters, which have significantly broadened the spectrum of opportunities for our students.

We work closely with them to improve their academic skills, technical skills, human values, and decision-making abilities.



MR. MUKESH SAHU

“ **One team, one vision, endless possibilities** ”

LETTER FROM CHAIRPERSON

Stepping into the role of Chairperson for IEEE GTBIT SB has been an exhilarating ride—one filled with challenges, triumphs, and unforgettable moments. From starting as an Editorial Coordinator to progressing through roles as Editorial Lead, Treasurer, and now Chairperson, this journey has been nothing short of transformative.

Under my tenure, our membership count skyrocketed by 98.78%, surpassing the 500+ members milestone—a testament to the growing enthusiasm for IEEE. We proudly secured two major awards: Best IEEE Day Celebration 2024 from IEEE Delhi Section MDC and an official recognition from IEEE US Headquarters. These accolades not only honor our hard work but also cement our SB's legacy on the global stage.

IEEE GTBIT SB isn't just a society; it's a launchpad. It has shaped my career and allowed me to explore my potential in content, creativity, technical innovation, and leadership. We have conducted 45+ impactful events facilitated 20+ student internships, and represented our college at national and international forums.

If there's one piece of advice I'd give every student, it's this: Join IEEE. It's more than just a membership—it's an investment in your future. Whether you seek networking, skill-building, or career-defining opportunities, IEEE opens doors you never knew existed. Proud to be part of this incredible journey—are you ready to start yours?



SAHIB PREET SINGH

“ Empower ideas, inspire change, and lead with vision—always forward.”

ABOUT



IEEE, Institute of Electrical and Electronics Engineering was established in 1963 symbolizing a collective effort by practitioners committed to supporting those enthusiastic about technology and innovation. Since then, this initiative has become the backbone of groundbreaking research and technological innovations. Over the years it has spanned globally creating a densely-connected network of students and professionals.

IEEE GTBIT SB was established in 2008 embodying the same spirit. Since then, this institution has thrived by motivated young students and mentors who have their heads wrapped in technology and minds filled with brilliant ideas. Each year, the institution continues to grow, not only by welcoming bright new minds but also by seeding an environment where these minds can flourish and thrive.

From hosting insightful and enthralling events to seizing opportunities and taking up challenges, IEEE stands as a patron of mutual growth, coming together and working in harmony towards advancing technology for humanity.



EXECOMM

EXECUTIVE COMMITTEE 2024 - 2025

CORE TEAM

SAHIB PREET SINGH

CHAIRPERSON

" Leadership Served with
a Side of Humor "

YASH PANDEY

VICE CHAIRPERSON

" Touch the Sky with
Glory "

DIYA SEHGAL

GENERAL SECRETARY

" Focused, Formal
and here for You. "

PRABHJOT SINGH

TECHNICAL SECRETARY

" Any Idea,
I'll bring it Alive. "

SHUBH GOEL

TREASURER

" Budget Approved,
Stress Removed "

HR

NAVJYOT KAUR

COORDINATOR

" Keeping Track,
Keeping you on Track "

SUPRET RJ KAUR

COORDINATOR

" Finding the Right Talent,
Driving Success. "

COMPUTER SOCIETY

GURSIMAR KAUR

SODHI

CHAIRPERSON

" Having Bugs? ok
let me see "

GURNOOR KAUR

BINDRA

VICE-CHAIRPERSON

ARYAN BAINS

GENERAL SECRETARY

" Architect of Tech Community
and Innovation. "

BIRJYOT SINGH

EDITORIAL
COORDINATOR

SNEHA SINGH

GD COORDINATOR

"Turning 'I'm just playing around' into
'Oh wow, that's genius' since forever"

ANHAD SINGH

NSM COORDINATOR

WOMEN IN ENGINEERING AFFINITY GROUP

BHAVIKA

CHAIRPERSON

" Blending ambition
with kindness "

JAPJOT SINGH

VICE-CHAIRPERSON

" Inspiring Innovation,
Supporting Women in
Engineering. "

SIMAR KAUR RENU

EDITORIAL
COORDINATOR

" The Bridge between
Ideas and Impact. "

TISHA KAUR

NSM COORDINATOR

GRAPHIC DESIGN

ASHMEET KAUR

LEAD

"Crafting Visually Stunning Frontends, One Pixel at a Time."

ANGADDEEP SINGH

CO - LEAD

"Dream Big, Design Bigger."

FALKEET SINGH

CO - LEAD

"Fixing Bugs while making new ones."

SHWETA RANA

COORDINATOR

NETWORKING & SOCIAL MEDIA

KULREET KAUR

LEAD

"Posts? Don't worry I am here to Lead!"

ASHMEET KAUR

COORDINATOR

"Engineering the Future of Networking."

ALISHA CHAUDHARY

COORDINATOR

"Making sure Engineers are 'Linkedin' everywhere."

DATAMASTER & PHOTOGRAPHY

PARAS NAGASHETTY

LEAD

AVANJAI JAIN

COORDINATOR

"Curious Minds, Limitless Possibilities Await."

PARNEET KAUR

COORDINATOR

ARSHPREET SINGH

COORDINATOR

EDITORIAL

SUCHITRA SAHOO

LEAD

"Leading through Words, Empowering through Ideas."

ISHIKA AHUJA

COORDINATOR

"Weaving thoughts into Words."

DEVANSHI SINGH

COORDINATOR

"Unifying Vision, Crafting words, Connecting ideas!"

CIRCUITMASTERS

DHRUV CHOPRA

LEAD

PARAS GOEL

CO - LEAD

VINAY DHAKA

COORDINATOR

"Mastering Multitasking, Crafting Innovative Electronics Solutions."

RESEARCH & DEVELOPMENT

VIDIT DALMIA

LEAD

"Empowering Research through Data Science"

AMITOJ SINGH

CO - LEAD

GUNISHA KAUR

CO-LEAD

"Curious by Nature, Innovating by Choice"

POLARIS

GURNOOR KAUR

LEAD

NAVJYOT KAUR

CO - LEAD

"Keeping Track, Keeping you on Track"

DEVANSHI SINGH

CO - LEAD

"Unifying Vision, Crafting words, Connecting ideas!"

TECH TEAMS

WEB DEVELOPMENT

ARSHDEEP SINGH

LEAD

“ Shaping the Web, Leading Innovation. “

MUSKAN KAUR

COORDINATOR

“ Bringing Ideas to
Life Digitally. “

JASPREET SINGH

COORDINATOR

“ Code Driven Innovation for a
Brighter Future. “

GAGANDEEP KAUR

COORDINATOR

“ Building the Web,
One Bug at a Time ! “

INTERNET OF THINGS

PRABHNOOR SINGH

LEAD

“ Building a Smarter Future for our Society. “

**PRAJJWAL
SHEKHAR GUPTA**
COORDINATOR

GURASEES SINGH
COORDINATOR

VISHESH VATS
COORDINATOR

DATA STRUCTURES & ALGORITHMS

HARMANJOT SINGH
COORDINATOR

“ Living on Cloud Nine “

KASHISH CHAUHAN
COORDINATOR

MACHINE LEARNING

HARJAS SINGH

LEAD

“ Teaching Machines to think, not blink. “

ASHNOOR SINGH
COORDINATOR

“ Mastering the Art of
Machine Learning “

DHAIRYAJEET SINGH
COORDINATOR

**DIVYAREHAT SINGH
KOHLI**
COORDINATOR

“ Dream, Learn,
Innovate and Inspire “

APP DEVELOPMENT

GURLEEN KAUR
COORDINATOR

GURMANPREET SINGH
COORDINATOR

“ Understanding challenges, coding solutions,
creating values. “

IEEE GTBIT SB JR.VOLUNTEERS'24

Achint Kaur
Anushka
Bavleen Kaur Saini
Bhavgun Kaur
Bhumika Bharadwaj
Brain Walter
Eknor Singh
Eshmeet Kaur
Guneet Singh Grover
Gurman Kaur
Gurprajas Kaur Saluja
Gurnoor Singh
Hardit Singh Sindhu
Harkirat Singh
Japleen Kaur
Japmanya Kaur
Jas Singh Ajmani
Jaskaran Singh
Jasleen Kaur
Jasnoor Kaur

Jasnoor Kaur
Kiratmeet Singh
Lakshay Bhardawaj
Manrai Singh
Mansimar Kaur
Pragya Mehta
Prathamjot Singh
Pushkar
Raghav Mehta
Ratti Noor Singh
Rohan Kumar Sharma
Sahajpreet Singh
Sanvi Aswal
Simarjeet Singh Sodhi
Suhani Kaur Saluja
Sukhmeet Kaur
Taranpreet Kaur
Tarandeep Singh
Vanshika Bansal
Vihaan Gupta

EMPOWERING INNOVATION TOGETHER



**WOMEN IN
ENGINEERING
AFFINITY GROUP**

The **IEEE WIE Affinity Group** under **IEEE GTBIT SB**, led by **Chairperson Bhavika**, is dedicated to empowering women in STEM. It **aims to motivate women and create a supportive environment**, inclusive of both women and men. Where mentors guide success and serve as role models, fostering growth. With a focus on mentorship, networking, and professional development, the zealous team amplifies the impact of women in the field.



CS CHAPTER

The **IEEE CS Chapter**, led by **Chairperson Gursimar Kaur Sodhi**, focuses on **computer science** through workshops and projects that enhance programming and problem-solving skills. These initiatives foster creativity, teamwork, and technical expertise. By offering hands-on experience, coding competitions, and mentorship, the chapter helps students stay on top of emerging trends, thrive in their desired fields, and grow as engineers.

EXPLORING DOMAINS TOGETHER



HackGTBIT SIG

HackGTBIT, the first ever SIG to be established, organizes and manages a wealth of skills to cultivate creativity and problem-solving through structured hackathons and workshops, equipping students to confront challenges and apply their technical expertise in practical contexts.

Circuit Masters SIG

Circuitmasters SIG provides essential mentorship and resources for exploring electronics and circuit design. From building circuits, and engaging in design competitions, to learning from industry experts it provides a premier platform for individuals pursuing a career in electronics.

Research and Development SIG

IEEE has been a cornerstone for research, from supporting research to providing publishing opportunities. The IEEE Research and Development SIG fosters a culture of innovation and research by regularly offering projects, hosting seminars, and providing collaboration opportunities with faculty and industry mentors, aiming at advancing knowledge and fostering groundbreaking discoveries.

Polaris SIG

For those who love to dive deep into space and travel billions of galaxies away, Polaris SIG is an initiative dedicated to astronomy. It offers students a collaborative platform to explore their interests, engage in research projects, and participate in various activities that unleash excitement and knowledge.

ROADMAPS TO FOLLOW MERN STACK

BASICS OF WEB DEVELOPMENT

- HTML (STRUCTURE)
- CSS (STYLING)
- JAVASCRIPT (INTERACTIVITY)

MASTER FRONTEND WITH REACT.JS

- REACT COMPONENTS & PROPS
- STATE MANAGEMENT (USESTATE, USEEFFECT)
- REACT ROUTER (NAVIGATION)
- CONTEXT API / REDUX (STATE MANAGEMENT)

WORK WITH DATABASES (MONGODB)

- MONGODB BASICS (DOCUMENTS, COLLECTIONS)
- CRUD OPERATIONS (CREATE, READ, UPDATE, DELETE)
- MONGOOSE FOR SCHEMA MODELING

UNDERSTAND BACKEND WITH NODE.JS

- BASICS OF NODE.JS & NPM
- CREATING A WEB SERVER WITH EXPRESS.JS
- MIDDLEWARE & ROUTING IN EXPRESS

CONNECT FRONTEND & BACKEND

- REST API WITH EXPRESS.JS
- FETCH API & AXIOS FOR API CALLS
- AUTHENTICATION (JWT, COOKIES, SESSIONS)

FULL-STACK AUTHENTICATION & SECURITY

- USER AUTHENTICATION (JWT, OAUTH)
- PASSWORD HASHING WITH BCRYPT
- CORS & ENVIRONMENT VARIABLES (DOTENV)

PERFORMANCE & BEST PRACTICES

- CODE SPLITTING & LAZY LOADING IN REACT
- API OPTIMIZATION & CACHING
- SECURITY BEST PRACTICES (HELMET.JS, RATE LIMITING)

DEPLOYMENT & HOSTING

- HOSTING FRONTEND (VERCEL, NETLIFY)
- DEPLOYING BACKEND (RENDER, HEROKU, AWS)
- CONNECTING FRONTEND & BACKEND IN PRODUCTION

ROADMAPS

TO FOLLOW

MACHINE LEARNING

BASICS OF PROGRAMMING & MATH

- **PYTHON FUNDAMENTALS:** VARIABLES, LOOPS, FUNCTIONS
- **ESSENTIAL LIBRARIES:** NUMPY (ARRAYS), PANDAS (DATA HANDLING), MATPLOTLIB (DATA VISUALIZATION)
- **BASIC MATHEMATICAL CONCEPTS:** ALGEBRA, PROBABILITY, STATISTICS

UNDERSTANDING DATA & PREPROCESSING

- **TYPES OF DATA:** STRUCTURED VS UNSTRUCTURED
- **DATA CLEANING:** HANDLING MISSING VALUES, DUPLICATES, AND OUTLIERS
- **DATA VISUALIZATION:** PLOTTING GRAPHS AND TRENDS FOR BETTER UNDERSTANDING

FUNDAMENTAL MACHINE LEARNING ALGORITHMS

- **REGRESSION:** PREDICTING NUMERICAL VALUES (E.G., HOUSE PRICE PREDICTION)
- **CLASSIFICATION:** DISTINGUISHING BETWEEN CATEGORIES (E.G., EMAIL SPAM DETECTION)
- UNDERSTANDING HOW MODELS LEARN FROM DATA

INTRODUCTION TO MACHINE LEARNING

- **DEFINITION AND APPLICATIONS** OF MACHINE LEARNING
- **TYPES OF ML:** SUPERVISED VS UNSUPERVISED LEARNING
- **INTRODUCTION TO SCIKIT-LEARN** FOR IMPLEMENTING ML MODELS

MODEL IMPLEMENTATION & EVALUATION

- **LOADING AND HANDLING DATASETS** (CSV, EXCEL, APIS)
- **SPLITTING DATA** INTO TRAINING AND TESTING SETS
- **EVALUATING MODEL PERFORMANCE** USING ACCURACY, PRECISION, AND RECALL

INTRODUCTION TO DEEP LEARNING

- UNDERSTANDING **NEURAL NETWORKS** AND HOW THEY WORK
- INTRODUCTION TO **TENSORFLOW** AND **PYTORCH** FOR DEEP LEARNING
- BUILDING A **SIMPLE NEURAL NETWORK** FOR IMAGE OR TEXT CLASSIFICATION

PROJECTS & HANDS-ON PRACTICE

- IMPLEMENTING SIMPLE ML PROJECTS SUCH AS:
- **PREDICTING HOUSING PRICES**
 - **MOVIE RECOMMENDATION SYSTEM**
 - **SENTIMENT ANALYSIS OF TEXT**

MODEL DEPLOYMENT & PRACTICAL APPLICATIONS

- **DEPLOYING ML MODELS** USING **FLASK** OR **STREAMLIT**
- **MAKING MODELS ACCESSIBLE** THROUGH A WEB INTERFACE
- **HOSTING ON FREE PLATFORMS** LIKE **GOOGLE COLAB** OR **HUGGING FACE**

ROADMAPS TO FOLLOW DSA

BASICS OF A PROGRAMMING LANGUAGE

- **CHOOSE A LANGUAGE:** C++, JAVA, OR PYTHON
- **MASTER SYNTAX, LOOPS, FUNCTIONS, AND RECURSION**
- **UNDERSTAND TIME AND SPACE COMPLEXITY** (BIG-O NOTATION)

BASIC DATA STRUCTURES

- **ARRAYS & STRINGS:** IMPLEMENTATION, SORTING, SEARCHING
- **LINKED LISTS:** TYPES (SINGLY, DOUBLY, CIRCULAR), OPERATIONS (INSERT, DELETE, REVERSE)
- **STACKS & QUEUES:** LIFO, FIFO, APPLICATIONS (BALANCING PARENTHESES, UNDO OPERATIONS)

SORTING & SEARCHING ALGORITHMS

- **SORTING:** BUBBLE, SELECTION, INSERTION, MERGE, QUICK SORT
- **SEARCHING:** LINEAR & BINARY SEARCH
- **UNDERSTANDING IN-PLACE SORTING AND STABLE SORTING**

RECURSION & BACKTRACKING

- **CONCEPT OF RECURSION:** BASE CASE, RECURSIVE CASE
- **COMMON PROBLEMS:** FIBONACCI, FACTORIAL, SUBSET GENERATION
- **BACKTRACKING APPLICATIONS:** N-QUEENS, SUDOKU SOLVER

ADVANCED DATA STRUCTURES

- **HASHING:** HASH TABLES, COLLISION HANDLING, APPLICATIONS
- **BINARY TREES & BST:** TRAVERSALS (INORDER, PREORDER, POSTORDER), INSERTION, DELETION
- **HEAPS & PRIORITY QUEUES:** MIN-HEAP, MAX-HEAP, HEAP SORT

GRAPHS

- **GRAPH REPRESENTATION:** ADJACENCY LIST & MATRIX
- **TRAVERSALS:** BFS & DFS
- **ALGORITHMS:** DIJKSTRA'S (SHORTEST PATH), KRUSKAL'S & PRIM'S (MINIMUM SPANNING TREE)

PRACTICE !!!

- SOLVE PROBLEMS ON PLATFORMS LIKE **LEETCODE, CODEFORCES, GEEKSFORGEEKS**
- WORK ON REAL-WORLD APPLICATIONS OF DSA
- PARTICIPATE IN **CODING COMPETITIONS** TO IMPROVE PROBLEM-SOLVING SPEED

DYNAMIC PROGRAMMING & GREEDY ALGORITHMS

- **CONCEPT OF OVERLAPPING SUBPROBLEMS AND OPTIMAL SUBSTRUCTURE**
- **COMMON DP PROBLEMS:** KNAPSACK, LONGEST COMMON SUBSEQUENCE
- **GREEDY APPROACH:** ACTIVITY SELECTION, HUFFMAN ENCODING

IEEE DAY 2024

Leveraging technology for a better tomorrow

IEEE Day is a global celebration that marks the first historic gathering of engineers in 1884, when professionals came together to share technical knowledge and ideas setting the stage for the creation of IEEE, the world's largest technical professional organization.

Each year, IEEE Day is celebrated worldwide with a range of activities, including workshops, seminars, hackathons, technical talks, and competitions, all designed to inspire innovation, promote technical growth, and unite members in addressing real-world challenges through technological advancements.

In 2024, IEEE GTBIT SB and IEEE DTU SB collaborated to bring this vibrant celebration to life from 14th to 16th October at GTBIT and DTU. The event served as a platform for students to explore, share ideas, and engage in technical challenges that pushed the boundaries of innovation.

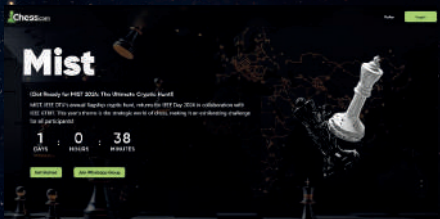


DAY ONE

IEEE DAY

MIST - CRYPTIC HUNT

MIST, IEEE DTU's signature cryptic hunt, engaged participants in a 24-hour chess-inspired journey, testing analytical skills through 20 progressively challenging cryptic puzzles, delivering an immersive and intellectually stimulating experience.



DREAM FORGE

Dream Forge challenged participants to envision futuristic ideas, starting with a quiz and culminating in a two-hour offline pitch competition showcasing innovation and creativity.

TINKERCASE 2.0

TinkerCase 2.0 highlighted innovative hardware prototypes like Line Following Robots, emphasizing hands-on skills and real-world problem-solving using Arduino and sensors.



TECH TRACK RELAY

This high-energy relay event combined technical problem-solving with a lemon-race twist, emphasizing teamwork, strategy, and collaboration.



IEEE DAY

DAY
TWO

CODE IN THE DARK

Code in the Dark challenged participants to memorize and rewrite code under time pressure, with three difficulty levels. The hardest level added random programming languages, testing both speed and accuracy in coding with quick thinking and flawless execution.



KNIGHT'S DUEL

Knight's Duel brought together 130+ chess enthusiasts, with the top 12 advancing offline. The competition showcased strategy, intellect, and sportsmanship, as players demonstrated their mastery of the game, earning well-deserved victories in a fierce tournament.

SPEAKER SESSION ON STRESS MANAGEMENT

The Stress Management Speaker Session, led by Life Coach Swaran Singh Jaggi, provided practical strategies like mindfulness, time management, and self-care. Interactive discussions equipped participants with tools to manage stress, improve mental well-being, and boost productivity in academic and professional settings.



**DAY
THREE**

IEEE DAY

DESIGNER DEAL ARENA

The Designer Deal Arena ignited creativity with 60 teams designing IEEE ads in just 1 hour 15 minutes. The top 18 advanced to a thrilling pitching round, where originality, creativity, and presentation were key to victory.

TECH IN TAMBOLA

Tambola got a tech twist with answers to 15 fundamental questions replacing traditional numbers. Participants raced through 20 tech questions, with three winners identified each round, making for a fun yet challenging competition.

CLOSING CEREMONY

The Closing Ceremony at GTBIT's Main Stage marked a grand finale, celebrating achievements and honoring contributions. Winners of various competitions were awarded trophies and certificates, while faculty members were recognized for their support. Esteemed guests, including professors and directors, joined in this momentous occasion, which ended with an energetic DJ session, leaving everyone with unforgettable memories.



JASHN-E- FRESHERS

DAY ONE



The first day brought together freshers for various exciting games and activities designed to inspire creativity, cultivate connections, and spark joy.

GROOVE & LOOP

Students embraced rhythm and innovation with a dynamic blend of music and loops, creating a space for connection and self-expression.



GLASS PONG

A game of precision where participants aimed for perfection by landing throws into glasses.



MYSTERY SENSE

A unique sensory challenge that had participants guessing hidden items by touch.

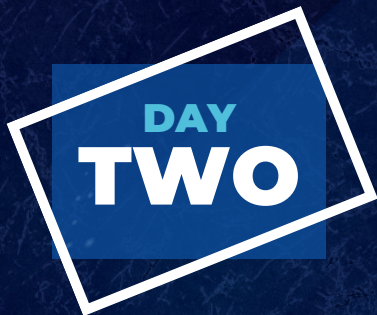
DARE TO DRAW

Students drew surprise tasks and fulfilled them with creativity and humor, spreading laughter across the event.

BOTTLE HOLD-OFF

A test of endurance where participants showcased their strength by holding bottles as long as possible.

JASHN-E-FRESHERS



IEEE ORIENTATION

Introduced students to the exciting world of IEEE, inspiring them to explore technical and networking opportunities.

SECRET SWAP

Participants guessed hidden items in a fun-filled, quick-thinking challenge.

BRAIN MAZE

Participants tested their memory and strategy by building creative word chains.

PLANK POWER OFF

A fitness competition where students displayed their endurance by holding planks, fostering a spirit of strength and resilience.

CATCH IT QUICK

A fast-paced game of reflexes as students competed to grab pencils the quickest.

FOLD, SHRINK AND DANCE

A thrilling newspaper dance challenge, folding the paper smaller with each round.

FILL DON'T SPILL

Students showcased precision by carefully filling glasses without spilling.

EYE DUEL

An intense staring contest that tested concentration and focus.



DEVIN AND ITS REFLECTION ON TECHNOLOGY TODAY

We stand at a remarkable point in history. Is it because of Devin? No, the exponential growth of AI and its dependency, paired with the need for time efficiency, is the subject of speculation. The introduction of ChatGPT, elaborate use of Generative-AI, incorporating Copilot, and now Devin, is the synopsis of rapidly evolving technology like never before.



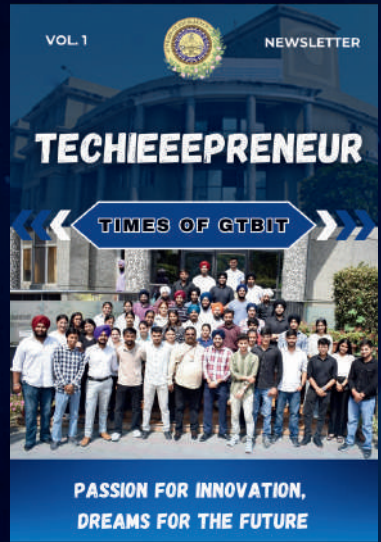
Devin itself is an extraordinary attempt at technology assisting the tasks of a software engineer. An advanced AI with a spectrum of elements like code completion, automated debugging, real-time collaboration tools, and performance optimization allowing it to tackle complex tasks and find innovative solutions while maintaining an ethical approach.

With advanced features such as natural language processing, machine learning, and deep learning algorithms, it is truly a formidable sketch on which the future of software engineering might be architected. This establishes a pillar that creates a dash in the market to create better and stronger competitors of human abilities. Even though the double-edged sword hangs in plain sight, it may also be the only option to move forward in the industry.

THE LAUNCH OF IEEE GTBIT SB'S NEWSLETTER : TECHIEEEPRENUER

The official newsletter of IEEE GTBIT SB, **TECHIEEEPRENUER**, was proudly inaugurated by the Director of GTBIT, along with respected dignitaries from the Inspection Committee and faculty members.

The newsletter highlighted the incredible achievements and accomplishments of IEEE members throughout the year, capturing the spirit of innovation and hard work that defines the community. It wasn't just the launch of a newsletter—it marked a new chapter in showcasing the impact and dedication of IEEE members.



MINI APOGEE

IN ASSOCIATION WITH BITS PILANI

IGNITING INNOVATION IN
TECHNOLOGY AND BEYOND!



The **IEEE GTBIT Student Branch**, in collaboration with **BITS Pilani**, hosted three exciting and engaging 24-hour competitions that tested both creativity and analytical thinking.



1. PIXEL PERFECT: UI/UX DESIGNING

It was a 48 hour competition which focused on creating a UI/UX with perfect pixel rendering with the help of softwares like Figma and AdobeXD. Participants got a hold of the designs and were able to create exact replicas of them in 48 hours.

2. CASE STUDY COMPETITION

The first competition, Case Study, focused on critical analysis, risk management, and decision-making skills. Participants were given a market entry problem statement, challenging them to think strategically and develop practical solutions.

Over 24 hours, they worked collaboratively to craft solution decks in .pptx format, showcasing their innovative ideas and thoughtful approaches. It was a great opportunity for participants to step into the shoes of decision-makers and apply their skills to real-world scenarios.



3. MOBILE PHOTOGRAPHY

This Competition brought out the artistic side of the participants. Armed with their cameras and smartphones, they explored the college campus and captured the energy and excitement of the various events happening at the time.

The competition encouraged participants to look at their surroundings from a new perspective, capturing moments that told a story. The best photographs were proudly featured in APOGEE Fest's Magazine, a testament to their talent and creativity.

INTERNATIONAL WORKSHOP ON VEGA PROCESSORS: UNLEASHING INNOVATION

The Vega Processors Workshop and the 24-hour hardware hackathon, Vegathon, organized by IEEE GTBIT and IIPC GTBIT in collaboration with the IT and ECE departments, the Vega Processors Workshop provided participants with a comprehensive introduction to Vega processors, showcasing their versatile applications in today's tech-driven world.

Participants engaged in hands-on sessions with the ARIES development board, mastering its components and connections through practical experience.



VEGATHON

Building Solutions with Vega Processors in 24 Hours

The event culminated in Vegathon, an intensive 24-hour hardware hackathon that showcased participants' innovation and technical prowess. Teams worked continuously to develop projects powered by Vega processors, demonstrating remarkable problem-solving abilities and technical expertise.



CELEBRATING EXCELLENCE: WINNING IDEAS FROM VEGATHON

ELDEREASE

TEAM : DEVSFORDEV

Team "**DevsforDev**," consisting of **Aryan Bains**, **Jaspreet Singh**, **Sneha**, and **Muskan**, secured first place with their winning idea, "**Elderease**." This innovative smartwatch assists the elderly by tracking vital health data such as heart rate and environmental conditions on an OLED screen, enabling both users and their caregivers to take proactive measures for better well-being.



PLANTGUARD

TEAM : AGRIVATOR

The team "**Agrivator**," comprising **Gurnoor Kaur**, **Falkeet Singh**, **Navjyot Kaur**, and **Mansimar Kaur**, secured second place with their Vega board-based system. Their idea monitored key environmental parameters to help farmers and gardeners make informed decisions and promote sustainable plantation.



DRIPWISE

TEAM : THE NBCS

DRIPWISE is an automatic drip-sensing system that monitors IV fluid levels in real time. Using an LDR sensor and LED, it detects when the drip rate falls below a set threshold and alerts caregivers. Developed by "**The NBCs**"—**Avneet**, **Gurleen**, **Neeraj**, and **Harjot** secured third place.



CONTEXT-AWARE SECURITY

The digital environment is constantly evolving and so are threats to our data and privacy. Traditional security solutions frequently follow a one-size-fits-all approach and lack the agility required to handle the ever-changing nature of cyber threats. Context-aware security emerges as a proactive strategy designed to enhance protection by considering the context in which digital activities occur.



Context-aware security enhances security decisions using additional information, adapting to dynamic business and IT environments. By looking at where you are, what time it is, what device you're using, and even your habits, security systems can adapt and react better to potential threats. Accessing your bank account on the go may trigger context-aware security, requiring extra verification for added protection based on your unusual location or behavior.

However, implementing this requires striking a balance. Over-reliance on context can be inconvenient or raise privacy concerns. Data collection also needs careful management, ensuring responsible handling. Despite challenges, as technology integrates further into our lives, context-aware security offers a dynamic defence against evolving threats.



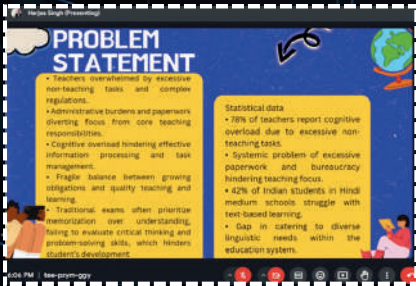
InnoSphere Ideathon



IEEE GTBIT Student Branch and TSG successfully organized an engaging Ideathon for the Executive Committee, providing a platform for creativity and teamwork.

The event featured two rounds—Round 1 judged by core team members and Round 2 by mentors—offering participants valuable feedback and guidance. Teams collaborated to refine and pitch their ideas, turning challenges into opportunities for innovation.

More than a competition, the Ideathon celebrated problem-solving and inspired participants to think bigger and push their ideas further.



AI:REGENERATIVE BRAKING SYSTEM

TEAM : Hamanjot Singh, Kashish Chauhan, Jaspreet Singh

AVALANCHE PREDICTION USING SAW SENSORS

TEAM : Gurnoor Kaur, Vinay Dhaka, Sneha Singh

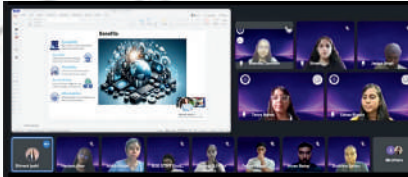
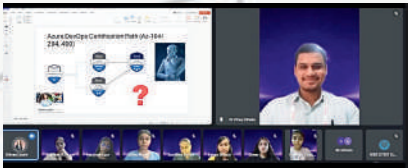
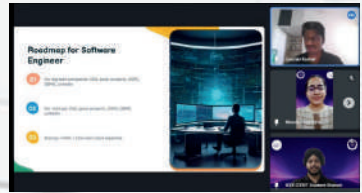
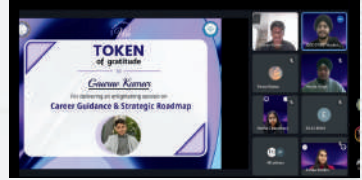
AUTOMATED MEDICINE DISPENSER SYSTEM

TEAM : Prajjawal, Curasees Singh, Vishesh Vats, Prabhnoor Singh

EMPOWER, EDUCATE, ELEVATE: OUR KEY SPEAKER SESSIONS

1. CAREER GUIDANCE SESSION (WIE SIG)

The IEEE GTBIT WIE Affinity Group hosted a valuable session, "Discovering Your Path: Career Guidance and Strategic Roadmap," with guest speaker **Mr. Gaurav Kumar**. The event covered diverse career options like software development, AI/ML, government exams, and higher studies, while also discussing the current job market and AI's role in the IT industry. Attendees enjoyed engaging discussions that enriched their understanding of career opportunities and future trends.



2. CLOUD COMPUTING (WIE SIG)

The IEEE GTBIT WIE Affinity Group hosted an insightful session on **Cloud Computing** with **Shivani Joshi** as the speaker. The event explored the different categories of cloud computing, career paths, and certification roadmaps to become proficient cloud engineers. Attendees also gained valuable tips on acing interviews and landing top positions in this growing field, with a lively discussion that added depth to the session.

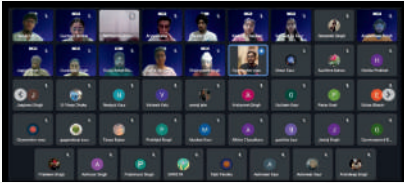
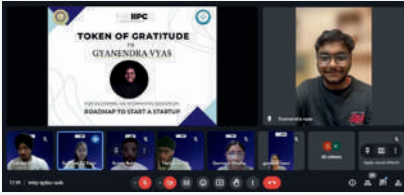
3. GEN AI (CS CHAPTER)

The IEEE GTBIT Computer Society Chapter hosted a dynamic session on **Generative AI** with **Subhashish Gosh**. The event covered key topics like the basics of Generative AI, Transformers, simplifying OpenAI concepts, and hands-on demonstrations with GPT-3.5 using Python SDK. Participants actively engaged in discussions, making the session both informative and interactive, offering a valuable learning experience for everyone involved.



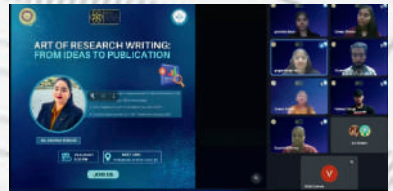
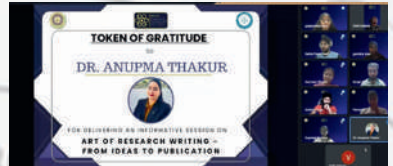
4. ROADMAP TO START A STARTUP (IEEE GTBIT SB and IIPC-GTBIT)

The IEEE GTBIT SB and IIPC GTBIT hosted an insightful session on the **Roadmap to Start a Startup** with guest speaker **Gyanendra Vyas**. Attendees delved into business planning, market analysis, funding strategies, and team building, while also gaining valuable insights into effective marketing. The session was further enriched by active discussions and participation, making it both engaging and highly informative.



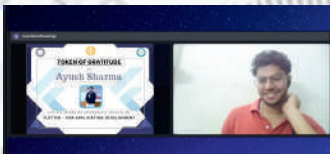
5. ART OF RESEARCH WRITING (IEEE GTBIT SB Research and Development SIG)

The IEEE GTBIT SB Research and Development SIG hosted an enlightening online session titled **"Art of Research Writing: From Ideas to Publication"** with guest speaker **Dr. Anupama Thakur**. The event provided invaluable insights on starting research, writing impactful papers, and confidently navigating the publication process. It was a rich learning experience that left all participants equipped with essential tools for their research journey.



6. FLUTTER WEBINAR (CS CHAPTER)

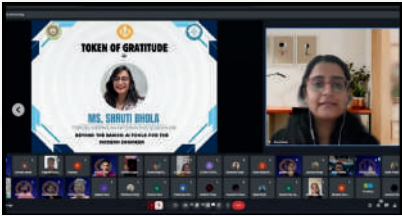
The IEEE GTBIT Computer Society Chapter recently hosted a webinar titled **"Exploring Flutter for App Development"** with **Ayush Sharma, CTO of Medoc Health IT Pvt Ltd**, as the distinguished speaker. Attendees gained valuable insights into career opportunities in application development, industry perspectives, the growing demand for Flutter, and the job prospects it offers. The event concluded with an engaging discussion, where participants actively contributed, enriching the overall experience of the session.





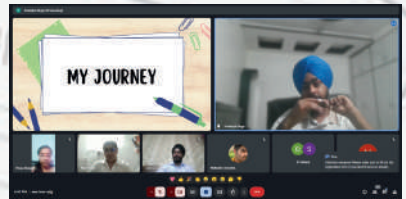
7. BEYOND THE BASICS : AI Tools for Modern Engineering (CS CHAPTER)

The IEEE GTBIT SB's Computer Society Chapter hosted an insightful session on **AI Tools for the Modern Engineer**, featuring **Ms. Shruti Bhola**, an industry expert from BT Group. The session explored a wide range of AI applications designed to streamline engineering workflows and highlighted ways to elevate skills using cutting-edge AI technologies. It was a valuable learning experience for all attendees, offering practical insights for the modern engineer.



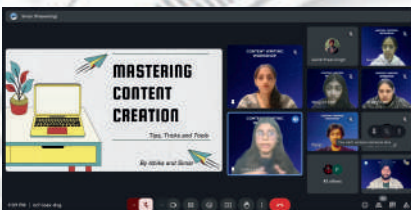
8. MY STORY: MOTIVATIONAL SESSION BY SUCCESSFUL INNOVATORS BY TECHNICAL SECRETARY

IEEE GTBIT SB, in collaboration with IIC GTBIT, presented an inspiring motivational session featuring **Prabhjot Singh**, the **Technical Secretary of IEEE GTBIT SB**. Drawing from real-life experiences, the session ignited a passion for innovation and success among the attendees, leaving them motivated and ready to tackle their future challenges with renewed energy.



9. MASTERING CONTENT WRITING

Mastering Content Creation, led by **Ishika Ahuja** and **Simar Kaur Renu**, was an engaging workshop on writing tips, editing, content formatting, and AI-powered prompts. A fun **Padlet** activity had participants crafting creative food delivery app notifications. The session also covered structuring content with quotes, headlines, body, and endings, ensuring clarity and impact. Attendees left with practical skills to enhance their writing.



QUIZEDIA

The IEEE GTBIT Student Branch hosted an exciting online quiz on Virtual Reality, where students put their knowledge to the test, competed with peers, and discovered fascinating facts about the world of VR and AI.

Winners walked away with a shoutout on their social profiles, making the event both competitive and rewarding. It was an engaging way to connect, learn, and dive into the future of technology!



SIGNIFICANCE OF HAM RADIO BY INTERNATIONAL SPEAKERS

IEEE GTBIT SB, in collaboration with IIPC-GTBIT, hosted an insightful session on HAM Radio, featuring Mr. V.K. Arya and Mr. Jogesh Dewan.

The session covered HAM radio fundamentals, emergency communication applications, and live demonstrations on real-time communication, Morse code, and Slow Scan Television (SSTV). The speakers also explained the certification process for becoming a licensed HAM operator.

The event was a great success, fostering learning and engagement.



IEEE DSSYWLC'24

Breaking Boundaries & Redefining Possibilities



IEEE DSSYWLC'24, held on February 8-9, 2025, at BVICAM, New Delhi, was a remarkable gathering of students, professionals, and industry leaders under the theme "**With Technology, Future is NOW!**"

Day 1 focused on Breaking Boundaries, featuring **networking sessions**, an insightful talk by Mr. Ramneek Kalra, and the **Entrepreneurial Horizons** panel with industry leaders. Mr. Ganesh Sahai (CTO, Nagarro) delivered a **keynote on emerging technologies**, while the WIE panel emphasized **women leadership in AI**. The day ended with a **cultural evening and networking dinner**.



Day 2, themed Redefining Possibilities, featured an inspiring session by Dr. Suneel Keswani, **TEDx Speaker**, followed by branch presentations and **WIENOVA 2.0**. Technical competitions like **Web Wizardry, Coding Clash, and Logo Logic** showcased participants' skills. The event concluded with **sports, Antakshari, a valedictory ceremony, a carnival, and a DJ night**, ensuring a perfect mix of learning and fun.

IEEE DSSYWLC'24 successfully empowered young minds, fostered collaboration, and celebrated innovation!



IEEE GTBIT made a remarkable impact at DSSYWLC'24, with over 25+ members attending the prestigious event at BVICAM, New Delhi. Our team not only actively participated but also brought home multiple accolades, showcasing our dedication and excellence in various domains.

Achievements & Recognitions:

- **Sahib Preet Singh** led our team to **Second Runner-Up** in the **Best Student Branch Presentation**.
- **Sahib Preet Singh, Falkeet Singh, Japjot Singh, and Angaddeep Singh** received **special recognition** from BVICAM for their exceptional service to **IEEE Delhi SSN**.
- **Paras Nagshetty** secured **First Runner-Up** in the **Best Campus Ambassador Award** and was honored as an **Exemplary Performer** for his insightful session.
- **Lakshaya Bhardwaj** won **Web Wizardry** – A Web Designing Competition, showcasing creativity and technical prowess.
- **Prathamjot Singh** was recognized as an **Exemplary Performer** in the Young Professionals session.

IEEE GTBIT continues to break boundaries, setting new benchmarks in leadership and innovation. Proud of our achievers!



BOOTCAMP 1.0



IEEE GTBIT
PRESENTS
BOOTCAMP PROGRAM

- ◆ WEB DEVELOPMENT
- ◆ DATA STRUCTURES AND ALGORITHMS
- ◆ ARTIFICIAL INTELLIGENCE MACHINE LEARNING
- ◆ INTERNET OF THINGS

DURATION : 3 MONTHS
20 APRIL 2024 ONWARDS

WEB DEVELOPMENT BOOTCAMP

- In this bootcamp students learned HTML, CSS, and JavaScript, focusing on creating dynamic and responsive websites.
- Hands-on practice projects included building interactive web pages, styling with CSS, and adding functionality with JavaScript.
- The bootcamp concluded with students developing personal portfolio website, enabling them to showcase their skills and projects.

DATA STRUCTURES BOOTCAMP

- This bootcamp covered core data structures like arrays, linked lists, stacks, queues, and recursion, essential for efficient problem-solving.
- It majorly focused on algorithmic design, with students solving real-world coding challenges to develop logical thinking.
- Also provided with a structured technical interview preparation, helping students build confidence in tackling coding assessments.

MACHINE LEARNING BOOTCAMP

- An Introduction to fundamental Machine Learning concepts was provided, covering algorithms like Random Forest, Decision Trees, and Linear Regression.
- Students worked on a real-world project to classify Near Earth Objects (NEOs) as hazardous or non-hazardous, using NASA's dataset.
- They learned model deployment using Streamlit, allowing real-time predictions and visualization of ML outcomes.

IOT BOOTCAMP

- This bootcamp helped build a strong foundation in Arduino, covering power supply, ADC/DAC, pin layouts, and serial communication.
- Students developed a home security system using ultrasonic and PIR sensors, integrating LEDs and buzzers for intrusion alerts.
- They explored real-world IoT applications, discussing how similar technologies are used in metro rail systems and mobile chargers.

BOOTCAMP 2.0



IOT & ELECTRONICS BOOTCAMP

- Learned key concepts in electronics and the role of circuit designers in emerging technologies.
- Gained hands-on experience with DC and AC circuit analysis and simulations in Multisim.
- Practiced designing and simulating op-amp and digital circuits, enhancing troubleshooting and problem-solving skills.

WEB DEVELOPMENT BOOTCAMP

- Built a strong foundation in HTML, CSS, and JavaScript for responsive and interactive web design.
- Gained hands-on experience with CSS flexbox, grid, media queries, and JavaScript DOM manipulation.
- Created a complete landing page and an E-commerce website, integrating learned concepts.



GRAPHIC DESIGN BOOTCAMP

- Designed social media posts, logos, and merchandise mockups using Canva, ensuring visual consistency and effective branding.
- Learned to design UI components, landing pages, and mobile app screens using Figma, focusing on layout, responsiveness, and user experience.
- Created a complete campaign design package, including social media posts, logo, merchandise, and a responsive website page.

MACHINE LEARNING BOOTCAMP

- Learned the basics of Python, including data types, operators, loops, functions, and exception handling.
- Introduced Numpy and Pandas for data handling and use Matplotlib for creating various types of data visualizations.
- Understood key ML algorithms like regression, clustering, decision trees, and SVM. At last applied all the knowledge on a final hands-on project.



WIRED FOR WORDS

C	T	C	N	D	W	S	C	T	C	R	C	N	X
O	X	E	M	O	N	R	M	O	E	D	R	R	E
D	O	E	S	T	N	C	E	R	C	C	O	N	S
E	R	R	T	R	W	N	R	O	C	C	S	A	C
K	C	M	E	A	C	R	G	O	S	S	S	N	I
R	R	R	R	N	B	O	E	C	O	P	R	O	N
O	S	O	O	S	A	O	S	K	C	E	E	S	O
Y	G	R	L	I	E	O	O	E	T	C	L	E	R
W	R	A	P	S	R	C	R	L	O	T	O	C	T
E	R	N	X	T	E	E	T	I	B	R	T	O	C
N	G	K	B	O	D	O	R	H	E	U	S	N	E
R	E	T	S	R	P	P	A	W	R	M	S	D	L
Y	R	E	R	C	E	N	O	O	N	A	E	S	E
S	R	A	S	C	U	T	P	D	E	O	S	E	U

FIND THE ANSWER TO THESE

- Where is IEEE headquartered?
- What does the third 'E' in IEEE stand for?
- Which component is used to amplify electrical signals?
- Which sorting algorithm is efficient with a time complexity of $O(n \log n)$ and is commonly used for large datasets?
- What loop executes at least once in C?
- What is the official IEEE magazine for technical articles?
- In which month is IEEE Day celebrated to honor technological achievements?
- What is IEEE's digital library called?
- What is the term for a one-billionth of a second?
- What is the IEEE award that recognizes lifetime achievement in electrical engineering?

TRIUMPHS OF IEEE GTBIT

STUDENT BRANCH AWARDS



EMERGING STUDENT VOLUNTEER AWARD

Angaddeep Singh
Falkeet Singh
Vinay Dhaka



OUTSTANDING WIE VOLUNTEER AWARD

Navjyot Kaur
Suchitra Sahoo

BEST STUDENT VOLUNTEER AWARD

Japjot Singh
Gurnoor Kaur



OUTSTANDING VOLUNTEER AWARD

Vidit Dalmia
Paras Nagshetty
Shubh Goel



IEEE DELHI SECTION AWARDS 2024

Student Network Award

Sahib Preet Singh
Prabhjot Singh
Sneha Soniwal

JK Pal Memorial Award

Rohan Singh
Binal Singh
Mohan Kaushik

Outstanding Student Volunteer Award

Yash Pandey
Aryan Bains
Prabhleen Singh

Outstanding WIE Student Volunteer Award

Gursimar Kaur Sodhi
Bhavika
Diya Sehgal



IEEE GTBIT SB IN IEEE DELHI SECTION



IEEE GTBIT SB achieved a significant milestone as its students were selected for key roles in the **IEEE Delhi Section Student Network (SSN)** for the tenure **2024-25**. This selection marked a proud moment, showcasing the dedication and excellence of the student branch.

Sahib Preet Singh earned the prestigious role of **Mentor** in IEEE Delhi SSN, marking the **first time a student from IEEE GTBIT was appointed to this position**. His selection reflected his exceptional leadership and valuable contributions to the community.

Additionally, four other members of the student branch secured important roles in various IEEE SSN committees:

- **Japjot Singh** – **Industrial Collaboration and Outreach Committee**
- **Falkeet Singh** – **Editorial Committee**
- **Angaddeep Singh** – **Graphic Designing Committee**
- **Gurnoor Kaur** – **Networking and Technical Activities Committee**

Their selection highlighted the active participation and talent nurtured within the student branch. This achievement not only strengthened its presence in IEEE Delhi SSN but also set an inspiring example for future members.

ACHIEVEMENTS



Sahib Preet Singh

- Won 2nd position in Vihaan 6.0 organized by Delhi Technological University
- Won 1st position in Zeemerquest 23 organized by Zimetrics
- Won Vihaan 007 as first runner up at Delhi Technological University
- Won Best Campus Ambassador Award at Chandigarh University
- Appointed as Mentor(head) of entire Delhi Section of IEEE consists of Delhi, Rajasthan, Chandigarh etc
- Got pre incubation for his startup idea at Atal Incubation Center
- Judged WIENOVA ideathon organized by IEEE Delhi Section
- Won Section Student Network Award from IEEE Delhi Section
- Won REM Scholarship from IEEE worth USD 1000
- Came in at the 2nd position during the Think and Blink competition organized by IEEE Jamia SB

Yash Pandey:

- Recipient of the IEEE Best Student Volunteer Award by IEEE Delhi Section

Diya Sehgal:

- Recipient of the IEEE Delhi Section Outstanding WIE Student Volunteer Award

**Prabhjot Singh:**

- 1st Runner-Up in Vihaan 6.0, India's largest student-run hackathon.
- Recipient of the "IEEE Delhi Section Student Network Award" for role as Technical Activities Coordinator.
- 1st Runner-Up in Vihaan 007, India's largest student-run hackathon.
- 1st Runner-Up in WIEHack, a hackathon organized at GGSIPU.
- Winner of the Cybersecurity Track in the Ideathon organized by IEEE GTBIT.
- Ranked among the Top 10 teams in a Hackathon organized by JIET.

Shubh Goel:

- Recipient of the Outstanding Volunteer Award for contributions to the IEEE GTBIT Student Branch.
- Served as IEEEExtreme 17.0 Ambassador, promoting and managing the global coding competition.
- Won the Best Idea Theme Award at the EmpowHer Hackathon by IIIT Delhi for presenting innovative solutions.

Gursimar Kaur Sodhi:

- Recipient of the IEEE Delhi Section Outstanding Women in Engineering Volunteer Award.
- Won Best WIE Team at Vihaan 6.0, DTU. Secured 2nd position at Women in Engineering-Fest, GGSIPU.

Bhavika:

- Recipient of the "Outstanding Women in Engineering Volunteer Award" from the IEEE Delhi Section Student Network (2024).

Japjot Singh:

- Recipient of the Best Student Volunteer Award for the tenure 2023-24.

Vinay Dhaka:

- Awarded Emerging Junior Volunteer at IEEE GTBIT SB
- Secured 1st place in the Mini Apogee Case Study
- Achieved 2nd place in the Innosphere Ideathon
- Secured 3rd place in the Tech Fest Perfect Pitch
- Represented GGSIPU in the All India University (AIU) Games for football (2023) and kabaddi (2024)
- Ranked in the Top 100 in India for AICTE Inventors Challenge 2024
- Gold Medalist in Inter-IPU Football (2024).

Vidit Dalmia:

- Secured 1st place in the Mini Apogee Case Study competition, held in collaboration with BITS Pilani.

Aryan Bains

- 1st Runner Up - Vihaan 007
- IEEE Delhi Section Outstanding Student Volunteer Award.

Kulreet Kaur

- Winner of Tech Track Relay on IEEE Day 2024 at DTU.
- Awarded " Best Team Lead " for IEEE GTBIT SB Executive Committee 2024-25 tenure.





Angaddeep Singh:

- Secured 1st place in Designathon on IEEE Day 2023.
- Finalist in HackQuest, a hackathon organized by IEEE Delhi Section covering eight states.
- Winner of Tech Track Relay on IEEE Day 2024 at DTU.
- Ranked among the Top 10 teams in the ILUX event at Invictus DTU.
- Recipient of the Emerging Student Volunteer Award by IEEE GTBIT SB.
- Selected as the sole volunteer from GTBIT for the International Leadership Summit organized by IEEE Delhi Section Women in Engineering Affinity Group.
- Appointed as a member of the Graphic Design Committee in IEEE Delhi Section Student Network for 2024-2025.

Navjyot Kaur:

- Winner of Tech in Tambola Showpiece on IEEE Day 2024.
- Secured 2nd place in Vegathon, a hardware hackathon organized by IEEE GTBIT SB.
- Finalist in HackQuest, a hackathon organized by IEEE Delhi Section.
- Awarded Ace Performer for September 2024.
- Recipient of the Outstanding WIE Volunteer Award by IEEE GTBIT SB.
- Successfully gathered 1000+ registrations for IEEE Day while serving as the PR Head.
- Awarded " BEST TEAM " for IEEE GTBIT SB Executive Committee 2024-25 tenure.

Falkeet Singh:

- Secured 2nd place in Vegathon, a hardware hackathon organized by IEEE GTBIT SB.
- Finalist in HackQuest, a hackathon organized by IEEE Delhi Section covering eight states.
- Awarded Ace Performer for December 2023 as a Junior Volunteer and May 2024 as HackGTBIT Co-Lead.
- Recipient of the Emerging Student Volunteer Award by IEEE GTBIT SB.
- Won 1st place in Designathon on IEEE Day 2023.
- Selected as an Editorial Committee member in IEEE Delhi Section.



Supret RJ Kaur:

- Participated in IC Hack 2.0, EmpowHer Hackathon (IIITD), and Vihaan (DTU)
- Served as PR Head & Outreach Coordinator for IEEE Day 2024, bringing in 1000+ registrations from 15 colleges and organizing a 3-day event with interactive activities.
- Conceptualized and organized "Tech in Tambola" as a main event for IEEE Day 2024.
- Secured 1st place in the Tech Track Relay Race at IEEE Day 2024.
- Awarded "BEST TEAM" for IEEE GTBIT SB Executive Committee 2024-25 tenure.

Harjas Singh:

- Winner of the Tech Track Relay @ IEEE Day
- Awarded Ace Performer for May 2024
- Qualified for the final round of Vihaan 07

Harmanjot Singh:

- Member of the ETC team at Amazon Web Services.

Simar Kaur Renu:

- Recognized as the Best Event Coordinator for IEEE Day.
- Awarded Ace Performer for May 2024

Divya Rehat Singh Kohli:

- Won a Gold Medal in the Tech Track Relay
- Recognized as the Best Event Coordinator for IEEE Day 2024.





Devanshi Singh:

- Reached the finals of HackQuest Hackathon.

Gunisha Kaur:

- Ranked in the Top 10 of HackQuest
- Secured 1st prize in Tech Track Relay @ IEEE Day DTU.

Gagandeep Kaur:

- Secured 1st place in the Tech Track Relay @ IEEE Day 2024, DTU.
- Awarded Ace Performer in IEEE GTBIT ExeCom for September 2024
- Qualified for the final round of Vihaan 07.

Ashmeet Kaur:

- Secured 1st place in a Case Study Competition at GTBIT, organized in partnership with BITS Pilani.

Gurnoor Kaur Bindra:

- Hackathons Attended – Vihaan, IIITD EmpowHer, IC Hack.
- Achievements – Won Best WIE Team in EmpowHer along with teammates.

Ashmeet Kaur:

- Achieved 3rd place in the Dream Forge Ideathon, held on IEEE Day 2024 in collaboration with DTU and GTBIT.

Gurasees Singh:

- Won the Best Event Manager Award on IEEE DAY 2024
- Secured 3rd place in the InnoSphere Ideathon
- Secured 1st place in Designathon Event of IEEE 2023.

Jaspreet Singh:

- Winner of 1st prize in Vegathon and Innosphere Ideathon.

Ashnoor Singh:

- Prizes Won – Secured 1st place in the Case Study Competition at Mini Apogee
- Achieved 1st position in the Tech Track Relay held at DTU
- Competitions Attended – Vihaan 7.0, Vegathon, Smart Delhi Ideathon.

Alisha Chaudhary:

- Secured 1st place in a Case Study Competition at GTBIT, organized in collaboration with BITS Pilani.

Muskan Kaur:

- Winner of 1st prize in Vegathon and Ideathon.



THE TRANSFORMATIVE ROLE OF AI IN REVOLUTIONIZING HEALTHCARE

In today's ever-evolving healthcare sector, one technology that stands out is Artificial Intelligence. From diagnosing diseases to assisting in surgeries and personalizing treatments, AI is transforming patient care. Powered by machine learning, NLP, and deep learning, it enhances efficiency, automates tasks, and improves healthcare outcomes like never before.

Drug development, often slow and costly, is being revolutionized by AI. By analyzing vast datasets, AI predicts drug efficacy and safety, streamlining the process and making it more efficient, ultimately bringing life-saving therapies to market faster. Wearable devices track vital signs in real time, with AI analyzing data to detect early disease signs and predict risks. This enables proactive care, personalized treatment, and fewer hospital readmissions, improving patient outcomes.

AI is transforming healthcare, but challenges like data security, regulatory compliance, and algorithm transparency must be addressed. Issues with reliability, interpretability, and governance persist. However, as AI evolves, its role in patient care will expand, reshaping medical practices and improving healthcare delivery worldwide.



BRIDGING GAPS SPARKING INNOVATION

—CONNECTING IDEAS, INSPIRING GROWTH—

1. COLLABORATION WITH IEEE DTU FOR IEEE DAY

IEEE GTBIT SB partnered with IEEE DTU SB to host **IEEE Day 2024**, celebrating the spirit of innovation and collaboration. This dynamic **collaboration** brought together students from both institutions to participate in exciting competitions along with knowledge-sharing sessions that emphasized teamwork and technical excellence. The event encouraged a culture of learning, networking, and collective growth while advancing the IEEE mission of technological progress for humanity.



DELCON BY IEEE DELHI SECTION 2.

IEEE GTBIT SB proudly received two prestigious awards at the **BVICAM Awards 2024: Best IEEE Membership Enhancement Award** and **Best IEEE Day Celebration Award**. These prestigious accolades were presented in the esteemed presence of Shri Manish Kumar, Shri Ganesh Kashyap, Prof. P. B. Sharma, Prof. Subrata Mukhopadhyay, Prof. Purna Gaur, Prof. A. Q. Ansari, Prof. A. K. Saini, and Prof. M. N. Hoda. This remarkable recognition stands testament to the unwavering commitment of IEEE GTBIT to inspiring innovation, excellence, and an active spirit of engagement of members while basking in the celebratory air of collaboration and growth that defines the true essence of IEEE.



IEEE WIE INTERNATIONAL LEADERSHIP SUMMIT (ILS) 3.

The **IEEE WIE International Leadership Summit (ILS) 2024** offered a remarkable platform for collaboration and leadership. **Angaddeep Singh, IEEE GTBIT SB's Graphic Design Co-Lead**, was selected as a **volunteer** and contributed to the event's success as part of the **design team**.

The summit brought together passionate IEEE members, cultivating meaningful connections and impactful experiences. The event showcased innovation, leadership, and coordination, providing attendees with valuable learning opportunities. It marked a significant milestone for IEEE GTBIT in strengthening global collaboration.



4. IEEE GTBIT SB AT WIEMPOWER 6.0 BY IEEE IGDTUW SB

The **IEEE GTBIT SB's HR Coordinators, Navjyot Kaur and Supret RJ Kaur** had the incredible opportunity to attend the **"Unlocking Opportunities and Funding: Exploring IEEE Support for Academic Projects"** session hosted by **IEEE IGDTUW SB**.

This insightful event provided a platform to explore the vast avenues of IEEE funding, leadership, and career growth. With engaging sessions led by **Prof. Manpreet Kaur** and **Ramneek Kalra**, our team gained valuable knowledge on securing IEEE support for academic projects and leveraging volunteering experiences for professional development.



MEET AND GREET

IEEE GTBIT SB hosted an engaging **Meet and Greet session**, introducing students to the incredible benefits of becoming an IEEE member. The event highlighted the global resources, networking opportunities, and access to technical workshops that IEEE offers.

It emphasized how being part of IEEE supports both **personal growth** and **professional development**, helping students find a perfect balance between the two. By the end of the session, everyone was excited about the opportunities and ready to get started!



JUNIOR VOLUNTEER PROGRAM

The **IEEE GTBIT Student Branch** successfully launched its **Junior Volunteer Program** to nurture new talent. After a rigorous selection process, **40+ candidates** were chosen from **150+ applicants**. These volunteers received training in essential technical and soft skills, equipping them for future challenges. This initiative reflected IEEE GTBIT's commitment to **empowering members**, enabling them to make meaningful contributions within IEEE and excel in their professional careers.



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. Showcasing the numerous opportunities and resources available to members, resulted in **150+ new memberships** and expanding our IEEE family to **over 500 IEEE Members**.

This drive successfully fostered community spirit, encouraged student involvement, and strengthened our branch's network, making us the most vibrant technical society on campus.



FROM ACADEMIC PURSUITS TO PROFESSIONAL EXCELLENCE: IN THE WORDS OF ROHAN SINGH



ROHAN SINGH
(MENTOR 2024-2025)

Reflecting on his journey from a student to the Sales Manager at Samaro, Rohan acknowledges the pivotal moments that have shaped his career. Graduating in Electronics and Communication Engineering from Guru Gobind Singh Indraprastha University (GGSIPU) provided him with a strong academic foundation.

The rigorous curriculum and diverse projects refined his analytical skills and instilled a discipline that has proven invaluable in his professional life. Beyond academics, his passion for chess played a significant role in developing his strategic thinking. Each game reinforced patience and foresight—qualities that have seamlessly translated into the business world.

As he transitioned into the professional realm, he discovered a natural aptitude for persuasive communication. Entering the sales domain felt like a logical progression, as the ability to connect with clients, understand their needs, and provide tailored solutions proved both challenging and rewarding.

At Samaro, a pioneering platform designed to enhance social event experiences, his role as Sales Manager is multifaceted. Leading the sales team involves more than just driving numbers—it requires building lasting relationships. His primary focus is ensuring that every client finds value in Samaro's offerings, which demands a deep understanding of their unique requirements.

His journey has highlighted the importance of continuous learning and adaptability. Embracing experiences across academic, professional, and extracurricular domains has been instrumental in his growth. The skills acquired from various aspects of life often intersect, guiding individuals toward excellence in their careers. In essence, his path from academic pursuits to professional success stands as a testament to the power of dedication, strategic thinking, and effective communication.

He hopes his story serves as an inspiration for those navigating the complexities of today's professional world.

THE VITAL ROLE OF BIOINFORMATICS IN MODERN HEALTHCARE



In the modern world of healthcare, bioinformatics plays a crucial role in reshaping how we understand and combat diseases. By combining computational analysis with biological data, bioinformatics helps us unravel the intricate complexities of various illnesses. It sifts through vast amounts of genetic, protein, and metabolic information, revealing patterns and markers that shed light on disease mechanisms.

Bioinformatics has shaped the field of personalized medicine, allowing healthcare professionals to deeply understand each patient's distinct traits and genetic profile, leading to treatment plans uniquely suited to their needs and circumstances. This approach aims to maximize treatment effectiveness while minimizing side effects. Additionally, bioinformatics aids in early disease detection by using predictive tools to identify individuals at risk before symptoms appear, allowing for timely interventions and better outcomes.

Bioinformatics has already left its mark on medical history through initiatives like the Human Genome Project and collaborative efforts such as the Cancer Genome Atlas. As technology advances further, bioinformatics continues to hold promise for revolutionizing healthcare, offering hope for more precise treatments and proactive disease management.

Article by- Suchitra Sahoo

INTERNSHIPS



SAHIB PREET SINGH

Batch of 2021 - 2025

INTERNEED AT



DIYA SEHGAL

Batch of 2021 - 2025

INTERNEED AT



PRABHJOT SINGH

Batch of 2021 - 2025

INTERNEED AT



YASH PANDEY

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VIDIT DALMIA

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ARSHDEEP SINGH

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**KULREET KAUR**

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INTERNEED AT**ASHNOOR SINGH**

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INTERNEED AT**PRABHNOOR SINGH**

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Batch of 2022 - 2026

INTERNEED AT**SUCHITRA SAHOO**

Batch of 2022 - 2026

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Batch of 2021 - 2025

INTERNEED AT**VINAY DHAKA**

Batch of 2022 - 2026

INTERNEED AT**HARMANJOT SINGH**

Batch of 2023 - 2027

INTERNEED AT**PRAJJWAL SHEKHAR**

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PLACEMENTS



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The logo for Infosys, featuring the word "Infosys" in a blue, sans-serif font with a registered trademark symbol.



SAHIB PREET SINGH

Batch of
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The logo for digit LIFE INSURANCE, featuring the word "digit" in a bold, lowercase, sans-serif font with a yellow dot over the 'i', and "LIFE INSURANCE" in a smaller, uppercase, sans-serif font below it.



**GURSIMAR KAUR
SODHI**

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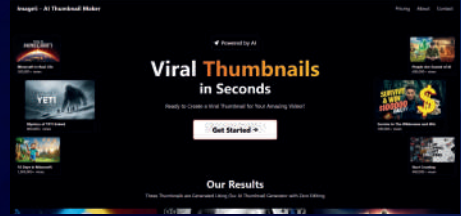
IMAGE5 - AI THUMBNAIL MAKER

PROJECT BY : ARYAN BAINS

Image5 is a state-of-the-art AI platform built to revolutionize thumbnail and image generation with unmatched precision and seamless global collaboration. With an industry-leading prompt adherence rate of over 90%, it ensures that every generated image aligns accurately with user input, delivering both precision and creative excellence.

By leveraging advanced AI-driven techniques, Image5 produces high-quality visuals that enhance engagement and brand identity. The platform is built with Next.js and TypeScript, ensuring top-tier performance, scalability, and responsiveness.

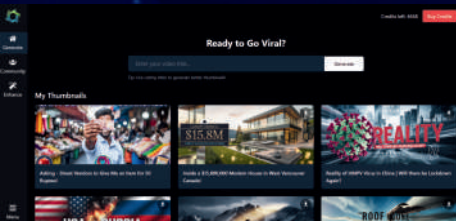
This powerful technological foundation allows for fast processing, seamless integration, and an optimized user experience, making it a go-to solution for businesses and creators seeking efficiency and innovation.



Designed for flexibility, Image5 offers dynamic customization, enabling users to tailor styles and aesthetics to match their unique branding needs.

The platform is developed in collaboration with a Canadian tech startup, fostering innovation through the integration of cutting-edge AI methodologies with real-world design applications. Its benchmark quality sets it apart from conventional tools, consistently outperforming competitors in both engagement and design precision.

By leveraging advanced technology and meticulous attention to detail, Image5 ensures that every generated image aligns seamlessly with user expectations. By prioritizing accuracy, adaptability, and technological excellence, Image5 redefines AI-powered image generation, making it an indispensable tool for creators, marketers, and businesses worldwide.



THE EDITORIAL

BOARD



We are proud to present the yearly IEEE GTBIT magazine, taking you through meticulously curated details of IEEE and offering a glimpse of what it's like to be a part of this society. This magazine results from a collaborative effort by our editorial board, who have carefully handpicked each element.

We have embarked on a journey that highlights the accomplishments of our community, showcasing the growth of our members in both technical and non-technical roles as they follow their passions.

We are proud of all that has been accomplished and motivated to move forward, remaining committed and dedicated to the success of IEEE GTBIT SB.

As we embark on another year of growth and innovation, we extend our heartfelt gratitude to Mr. Mukesh Sahu Sir for his constant guidance and unwavering support.

"Alone, we make a move; together, we make progress."



JOIN IEEE TODAY

AND JUMP START YOUR ENGINEERING JOURNEY



SCAN FOR SOCIALS

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