

The byte

The Computer Science Department Society of
Bharati College, University of Delhi

August, '24
Edition

Technophiles Bharati

BYTE BY BYTE, WE IGNITE
TECH INSIGHT



Technophiles Bharati: The Computer Science Department

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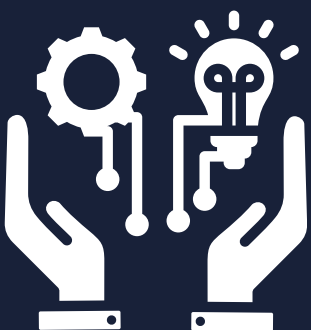
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TECHNOPHILES TEAM

TECHNOPHILES: THE COMPUTER SCIENCE DEPARTMENT

Welcome to Technophiles, the student-led center for innovation and exploration within the Department of Computer Science at Bharati College. Established in 2023, Technophiles aims to nurture a passion for technology and innovation.



Technophiles is a vibrant, student-run initiative by the Department of Computer Science at Bharati College, University of Delhi. Founded in 2023, our name embodies our mission: 'Fostering a love for technology (as technology enthusiasts are often called "Technophiles")'. We believe learning extends beyond textbooks, offering a platform for students to dive deeper into the exciting world of

computer science, experiment with innovative ideas, and connect with a passionate community of fellow tech enthusiasts.

"Technology is just a tool. In terms of getting the kids working together and motivating them, the teacher is the most important."

- Bill Gates





MEET OUR TEAM



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MEET OUR TEAM



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(Event
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The byte

OUR AIM:

Empowering Future Tech Leaders

We aim to create a dynamic and collaborative environment where students can develop their technical skills through hands-on experiences. By going beyond the curriculum, we offer workshops and events featuring industry experts, fostering a deeper understanding of computer science concepts and their real-world applications. We encourage students to explore their creative potential by providing opportunities to experiment with new technologies and participate in coding competitions.

Technophiles empowers students to confidently lead and drive innovation in the ever-evolving tech industry, equipping them with the skills and vision to shape the future.

"The most important thing about technology is how it changes people."

-Jaron Lanier



VISION: Shaping the Future of Tech Education



The Future of Tech Education: Empowering Minds, Inspiring Innovation, and Transforming Tomorrow.

Our vision is to make Technophiles synonymous with excellence in Computer Science education at Bharati College. We strive to be a leading force in fostering a culture of innovation and exploration within the department. We envision a future where Technophiles provides students with the resources and support they need to excel academically and translate their knowledge into practical solutions.

We believe in nurturing a diverse and inclusive community where students from all backgrounds feel comfortable exploring their interests. We are committed to helping them develop their technical expertise. By providing a platform for collaboration and knowledge sharing, Technophiles aims to empower the next generation of tech leaders who will shape the future of the industry.

"The art of debugging is figuring out what you really told your program to do."
- Andrew Singer



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1. In the context of AI, what does the term “Mooring Problem” refer to?
 - a) Limited AI's inability to evolve
 - b) Difficulty in defining human-level AI
 - c) The challenge of grounding AI in real-world data
 - d) Computational limitations of neural networks
2. Which computer architecture introduced the concept of "memory-mapped I/O"?
 - a) Harvard Architecture
 - b) Von Neumann Architecture
 - c) RISC Architecture
 - d) CISC Architecture
3. What is the primary purpose of a “Hopfield Network” in AI?
 - a) Image recognition
 - b) Optimization problem solving
 - c) Sequential data analysis
 - d) Natural language processing

4. In quantum computing, what is a “Noisy Intermediate-Scale Quantum” (NISQ) device?
 - a) A quantum device with limited error correction
 - b) A theoretical model for large-scale quantum computers
 - c) A quantum computer that operates without classical components
 - d) A high-fidelity quantum gate
5. In terms of AI ethics, what is the “value alignment problem”?
 - a) Ensuring AI systems make moral decisions
 - b) Making sure AI systems align with human values
 - c) Designing systems that optimize for efficiency
 - d) Balancing AI's decision-making with government regulations
6. What is the term used for software that simulates a neural network's ability to self-learn without supervision?
 - a) Genetic Algorithms
 - b) Stochastic Gradient Descent
 - c) Autoencoder
 - d) Unsupervised Learning
7. What is a “Systolic Array” used for in computing systems?
 - a) Image rendering
 - b) Data compression
 - c) Matrix multiplication in parallel computing
 - d) Software simulation

8. What does the “PAC” in PAC learning stand for in machine learning theory?
- a) Probably Approximately Correct
 - b) Potential Algorithmic Classifier
 - c) Partially Accurate Classification
 - d) Programmatic Automated Computing
9. In computer security, what is an “Elliptic Curve” primarily used for?
- a) High-speed hashing algorithms
 - b) Public key cryptography
 - c) Data compression techniques
 - d) Reducing complexity in sorting algorithms
10. What is the key feature of the "Hyperledger Fabric" framework in blockchain technology?
- a) Its permissioned nature
 - b) Proof of work mining
 - c) Peer-to-peer encryption
 - d) Use of cryptocurrency tokens

ANSWER

1. c) The challenge of grounding AI in real-world data
2. b) Von Neumann Architecture
3. b) Optimization problem solving
4. a) A quantum device with limited error correction
5. b) Making sure AI systems align with human values
6. d) Unsupervised Learning
7. c) Matrix multiplication in parallel computing
8. a) Probably Approximately Correct
9. b) Public key cryptography
10. a) Its permissioned nature

WOMEN IN STEM

Throughout history, women have made groundbreaking contributions to technology.

MARGARET HAMILTON

Margaret Hamilton (born August 17, 1936, Paoli, Indiana, U.S.) is an American computer scientist who was one of the first computer software programmers; she created the term software engineer to describe her work. She helped write the computer code for the command and lunar modules used on the Apollo missions to the Moon in the late 1960s and early '70s.



ADA LOVELACE

Ada Lovelace (born December 10, 1815, Piccadilly Terrace, Middlesex [now in London], England—died November 27, 1852, Marylebone, London) was an English mathematician, an associate of Charles Babbage, for whose prototype of a digital computer she created a program. She has been called the first computer programmer.



GRACE HOPPER

Grace Hopper (born December 9, 1906, New York, New York, U.S.—died January 1, 1992, Arlington, Virginia) was an American mathematician and rear admiral in the U.S. Navy who was a pioneer in developing computer technology, helping to devise UNIVAC I, the first commercial electronic computer, and naval applications for COBOL (common-business-oriented language).

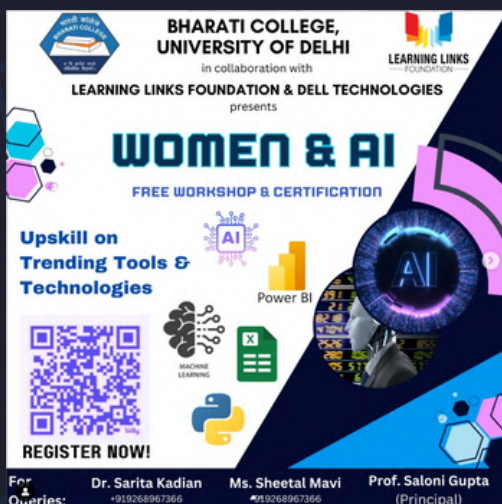
WOMEN AND AI WORKSHOP CERTIFICATION CEREMONY

(In collaboration with Learning Links Foundation and Dell Technologies)

DATE: 12 August, 2024
TIME: 12:00 PM Onwards
VENUE: Seminar Room,
Bharati College

MAJOR PARTICIPANTS

TIC- Dr. Sarita Kadian
Convener - Ms. Sheetal
Mavi
All Department
teachers
President - Riti Gupta
Guest Trainers
All Technophiles Team
200+ Participants



ABOUT THE SPEAKER

The Women and AI Certification Ceremony, held in collaboration with the Learning Links Foundation and Dell Technologies, celebrated a key step in preparing women for diverse and impactful roles in the tech industry.

With over 100 students participating, the workshop offered deep insights into Artificial Intelligence, sparking enthusiasm and confidence among future leaders.

This event highlights the growing momentum toward a more inclusive and innovative tech landscape, empowering women to take on varied and influential positions. The collaboration emphasizes the importance of equipping women with cutting-edge skills for a dynamic future in AI.

CONCLUSION

The Women and AI Workshop concluded with overwhelming success, achieving its goals of empowerment, education, and collaboration. Participants actively engaged in dynamic discussions, interactive sessions, and hands-on activities, gaining invaluable skills and insights in AI.

The workshop highlighted strategies for overcoming barriers and showcased pioneering projects led by women in the field. Feedback was exceptionally positive, with many attendees expressing a renewed commitment to fostering inclusivity in AI. The connections made and ideas shared are set to fuel future initiatives, marking this workshop as a pivotal step toward a more equitable and innovative AI landscape.



CONNAUGHT PLACE MEET-UP

Date: 3rd August, 2024

Time: 11 AM Onwards

Venue: Coffee Home, Connaught Place

— VISION —

At Technophiles, we are driven by a vision of growth through insights from industry leaders. Our recent meet-up, "Unveiling the Desired Traits Big 4 & SMBs Hire For," showcases our commitment to staying ahead of industry trends and enhancing our team's capabilities.

We foster a culture of continuous learning, empowering members to innovate and excel. By aligning our practices with the skills sought by top companies, we aim for the highest standards of excellence.

Participation in such events strengthens our network and drives impactful change within Technophiles, creating a dynamic environment that nurtures the growth of our members and the broader community. Together, we strive to be a beacon of knowledge, innovation, and professional excellence in technology and corporate partnerships.

ABOUT THE SPEAKER

Vishal Singhal, Co-Founder & CBO at CellStrat, has been transforming the AI landscape since 2018, leveraging over 20 years of experience in marketing, sales, and operations to make Generative AI accessible and affordable. He has significantly impacted companies' cost savings through AI integration and also founded etruevalue in New Delhi, focusing on international sales and product marketing. Additionally, Vishal co-founded CSSmartKids, showcasing his versatility. His vision is to create AI solutions that are as user-friendly as they are powerful, making them cost-effective for businesses of all sizes

ABOUT CELLSTRAT

CellStrat is a leading Generative AI Product firm that serves a global clientele through its advanced AI SAAS platform. Established to drive innovation, CellStrat offers flagship products such as the CellStrat AI Platform and Imagineview GenAI. These tools empower thousands of AI teams and developers around the world to develop, deploy, and scale AI solutions with greater efficiency. By providing cutting-edge technology and support, CellStrat enables businesses of all sizes to harness the full potential of AI, enhancing their operational capabilities and fostering rapid growth.

REPRESENTATIVES

Priyanshi Gupta (Publishing Editor)

Harshita Gupta (Director of Corporate Partnerships)

Jasmeet Kaur (Head of Sponsorship Liaison)

ASPECTS COVERED

The meet-up at Coffee Home, CP, provided valuable insights into the traits that major corporations and SMBs seek in candidates, exploring the essential skills and attributes valued by the Big4 and contrasted these with the unique qualities sought by small-to-medium businesses.

The discussion highlighted emerging trends in hiring practices and practical examples, showing how these traits apply in real business settings. The event also offered significant networking opportunities, emphasizing importance of building professional connections.

OBJECTIVES

The meet-up at Coffee Home, CP, on "Unveiling the Desired Traits Big 4 & SMBs Hire For" aimed to enhance our understanding of critical skills valued by top companies and SMBs. Hosted by Vishal Singhhal, the session provided insights into hiring practices, helped build industry connections, and guided us in implementing best practices. This aligns with Technophiles' commitment to continuous learning and innovation, ensuring we stay competitive and set new standards of excellence.

ACHIEVEMENTS

It deepened our understanding of industry hiring practices and refined our professional development strategies, established meaningful connections with experts such as Chandan Gupta and Prem, setting the stage for potential future collaborations. The actionable insights we gained are poised to drive innovation and growth within Technophiles. The event has significantly enhanced our visibility in the industry, underscoring our dedication to excellence and continuous learning. We gained strategic insights into the digital transformation process.

CONCUSION

The meet-up at Coffee Home, CP, on "Unveiling the Desired Traits Big 4 & SMBs Hire For, " hosted by Vishal Singhal, was an enriching experience for Technophiles. Connecting with industry experts like Chandan Gupta and Prem provided valuable insights into the hiring practices of leading corporations and SMBs, broadened our understanding and fueled our commitment to continuous learning and innovation. This event reinforced our dedication to networking and best practices, which will drive our success. We are excited to integrate these insights into our initiatives and continue to set new standards of excellence in technology and corporate partnerships.



GOOGLE DEVELOPERS GROUP NOIDA MEETUP

Date - 4th August 2024
Time - 10:00 AM Onwards
Venue - Galgotias College
Of Engineering &
Technology

MAJOR PARTICIPANTS

TIC- Dr. Sarita Kadian
Convener - Ms. Sheetal
Mavi
President - Riti Gupta
Guest Speaker
All Technophiles Team
80+ Participants

Vision

At Technophiles, we're dedicated to harnessing the power of technology to drive meaningful change. Our recent participation in the Google Developers Group meetup allowed us to gain valuable skills in cutting-edge innovations, from multi-platform development to generative AI. This event enriched our understanding of the latest tools and strategies, reinforcing our commitment to continuous learning and collaboration.

By integrating these new skills, we aim to stay ahead in the rapidly evolving tech landscape, driving progress and creating impactful solutions. Our involvement in such forward-thinking initiatives positions us to lead in technologies that enhance our daily lives and work, ultimately making a significant difference in the world.

OBJECTIVES

At Technophiles, our goal is to empower students and future leaders by merging cutting-edge technology with practical skills. Our recent Google Developers Group meetup provided valuable insights into emerging fields like generative AI and multi-platform development. We focused on mastering these advanced tools and strategies, ensuring that our members not only gain key technical competencies but also learn to apply them effectively in real-world scenarios. This balanced approach prepares our community to lead, innovate, and make significant contributions to the tech industry.

ASPECTS COVERED

The GDG Noida meetup provided an in-depth exploration of several key topics. Participants delved into the latest updates from Google I/O held in California (USA), focusing on multi-platform development and the use of Compose to create consistent cross-platform applications. The event also explored the challenges associated with using Generative AI with private data, emphasizing secure and context-aware chatbot development. Additionally, Retrieval-Augmented Generation (RAG) and Elastic Search were discussed, highlighting their role in improving generative AI accuracy. Practical demonstrations, including the use of Elastic Playground for multilingual RAG models, showcased how these technologies can be applied in real-world scenarios.

REPRESENTATIVES

Riti Gupta (President)

Manya Sharma (Chief Technical Officer and Social Media Lead)

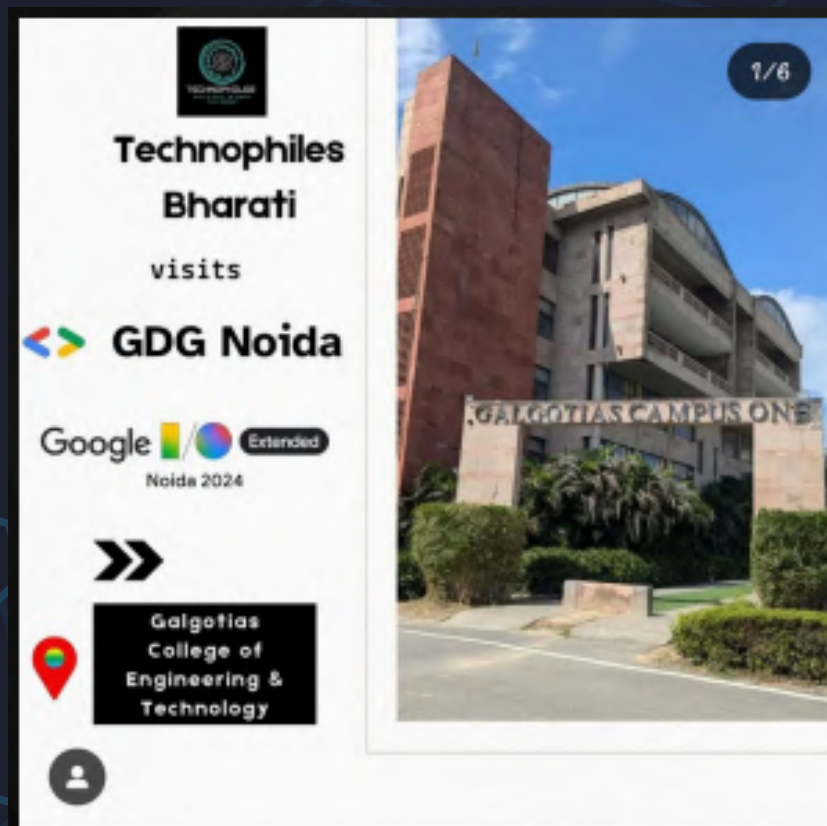


ACHIEVEMENTS

The Technophiles Society of Bharati College is proud of the outcomes from our recent networking event and GDG Google meetup. A significant achievement was the successful integration of advanced technological skills with strategic processes, preparing students for future leadership roles. Participants engaged in deep discussions on cutting-edge topics like generative AI and multi-platform development, guided by industry experts. The event facilitated valuable connections, enhancing our members' professional networks. By combining technical expertise with effective process understanding, our students are well-positioned to become influential tech leaders, equipped to make impactful contributions in the industry and drive innovation forward.

CONCLUSION

The GDG Noida meetup offered an insightful exploration of cutting-edge technology that bridges theory with practical application. From Google I/O innovations in multi-platform development to integrating Generative AI with RAG models, discussions that provided valuable perspectives on future tech trends. Participants gained practical knowledge in using Elastic Playground for multilingual, context-aware chatbots and learned about effective information retrieval techniques. The real-world application discussed—enhancing event management with these technologies—demonstrated their tangible impact. This event expanded technical knowledge and inspired innovative thinking, positioning attendees to address complex challenges and drive future tech initiatives, contributing to a more advanced and connected world.



AUDIOBLOCK SERIES

PREPARING FOR INDUSTRY - COMPARING
SKILLS & PROCESSES WITH AKSHIT BATRA

Date: 5 August,
2024 Platforms:
Spotify, Podbean,
Youtube,
Buzzsprout

MAJOR PARTICIPANTS

TIC- Dr. Sarita Kadian
Convener - Ms.
Sheetal Mavi
President - Riti Gupta
Guest Speaker
All Technophiles
Team

ABOUT THE SPEAKER

Akshit is a seasoned industry professional with extensive experience navigating today's dynamic job market. Known for his deep understanding of the skills and processes that drive success, Akshit has been pivotal in guiding numerous individuals toward career advancement. In this episode, he will share his expert insights on preparing for the industry, comparing and honing essential skills, and adopting effective processes to stand out in a competitive landscape.



VISION

In preparing for the industry, envisioning the balance between skill and process is essential. Skills are your individual strengths, from technical know-how to creative problem-solving, which allow you to stand out. They are dynamic and ever-evolving, enabling you to adapt to industry changes.

On the other hand, processes represent the systematic approach to applying these skills in a real-world context. They ensure that your skills contribute to broader goals efficiently and consistently. A successful industry professional not only hones their skills but also understands and optimizes processes. This synergy between skill and process is key to long-term success and innovation.

OBJECTIVE

The objective in preparing for the industry is to achieve a harmonious balance between skill development and process optimization. Skills are the core competencies that enable you to perform specific tasks with proficiency, setting you apart in your field. However, without a solid understanding of processes, these skills may not be applied effectively within an organizational framework.

Processes provide structure, ensuring that tasks are completed efficiently, consistently, and in alignment with strategic goals. By focusing on both refining your skills and mastering relevant processes, you position yourself for success, capable of contributing meaningfully and driving continuous improvement in the industry.

ACHIEVEMENTS

The Technophiles Society of Bharati College takes pride in fostering the achievements of students preparing for the industry. A key accomplishment is the mastery of both skill and process. Skills, whether technical or creative, empower students to excel in specific domains, making them competitive in the job market.

However, what truly sets them apart is their understanding of processes. By integrating these skills within structured workflows, students ensure their work is not only effective but also scalable and aligned with industry standards. This dual focus on skill refinement and process optimization equips them to make significant contributions and thrive in their professional careers.

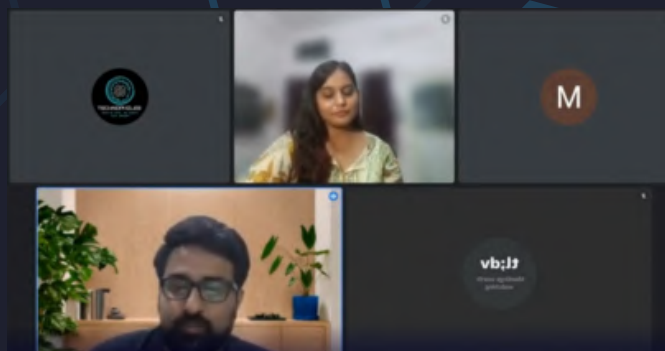
HOST OF EVENT

Adya's skillful hosting brought a vibrant energy to the conversation, guiding it seamlessly and ensuring that Akshit's insights on career preparation, skill enhancement, and standing out in a competitive market were both engaging and accessible. The episode, marked by Adya's adept facilitation, provided a practical and inspiring discussion that promises to offer valuable takeaways for anyone looking to advance their career.

CONCLUSION

In conclusion, the latest podcast episode with Akshit provided a wealth of valuable insights into navigating today's job market. Akshit's expertise and practical advice on career preparation, skill enhancement, and strategies for standing out were both enlightening and actionable.

This episode has equips listeners with essential tools and strategies to advance their careers with confidence and clarity. We look forward to bringing more impactful content that continues to support and inspire professional growth.



AUDIOBLOCK SERIES

WOMEN IN STEM WITH ALIZA SHAMSI

Date: 5 August,
2024 Platforms:
Spotify, Podbean,
Youtube,
Buzzsprout

MAJOR PARTICIPANTS

TIC- Dr. Sarita Kadian
Convener - Ms.
Sheetal Mavi
President - Riti Gupta
Guest Speaker
All Technophiles
Team

ABOUT THE SPEAKER

Aliza Shamsi is an Assistant Risk Consulting Associate at Moody's with a Master's in Statistics and a Bachelor's in Statistics with Computer Science from Lady Shri Ram College. She's a dedicated mentor, podcast host of 'Dreams and Doubts,' and an accomplished public speaker.

With extensive experience mentoring over 1000 freshers and delivering talks at esteemed institutions, Aliza is a dynamic force in STEM, known for her expertise and diverse talents in public speaking, writing, and poetry.



VISION

Our vision for this episode of AudioBlock is to spotlight the impactful contributions of women in STEM by featuring insightful conversations with experts like Aliza Shamsi. We aim to create an inspiring and educational experience that highlights the achievements, challenges, and future aspirations of women in the field.

Through engaging discussions, we seek to provide valuable advice, foster a supportive community, and promote gender equality in STEM. By showcasing diverse perspectives and practical insights, this episode aspires to motivate and empower listeners, while celebrating the significant role women play in driving technological innovation and leadership

OBJECTIVE

The objective of this episode of AudioBlock is to spotlight the experiences and insights of women in STEM, promoting awareness and understanding of their contributions and challenges. This episode aims to inspire and educate listeners by showcasing the achievements of prominent women in technology, fostering discussions on gender equality, and providing practical advice for aspiring professionals.

By featuring engaging conversations and expert perspectives, we seek to enhance listeners' knowledge, encourage the pursuit of STEM careers, and build a supportive community that celebrates and supports women's roles in driving innovation and leadership in technology.

ACHEIVEMENTS

We are excited to celebrate the successful launch of this episode of AudioBlock, featuring an inspiring discussion with Aliza Shamsi, aired on August 9th, 2024. This episode, a collaborative effort between Technophiles, Competitions_Generator, and DU Connection, highlighted the achievements and experiences of women in STEM.

The conversation offered valuable insights and practical advice, engaging our listeners with the compelling narratives of female tech leaders. The episode's success reflects the strong interest in promoting gender diversity and empowerment in STEM fields, demonstrating the impact of our collaborative efforts in fostering meaningful dialogue and inspiration.

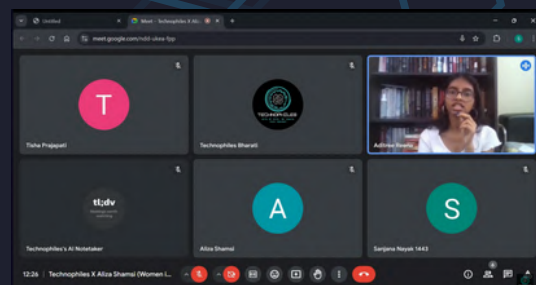
HOST OF EVENT

Aditree's engaging and insightful approach brought a dynamic energy to the discussion, effortlessly guiding the conversation and drawing out valuable perspectives from our guests. Her adept hosting skills ensured a seamless flow, making complex topics accessible and captivating for our listeners. Aditree's passion for the subject matter and ability to connect with both the audience and guests alike truly elevated the episode, making it a memorable and impactful addition to our series.

CONCLUSION

As we conclude this insightful episode of AudioBlock, we extend our sincere thanks to Aliza Shamsi for sharing her valuable experiences and expertise. Your perspectives on women in STEM have provided our listeners with both inspiration and practical advice. We hope this discussion has not only offered meaningful insights but also sparked new ideas and aspirations.

A special thanks to our audience for tuning in and engaging with the content. Your interest and participation are what make this series impactful, and we look forward to bringing more enriching conversations in future episodes.

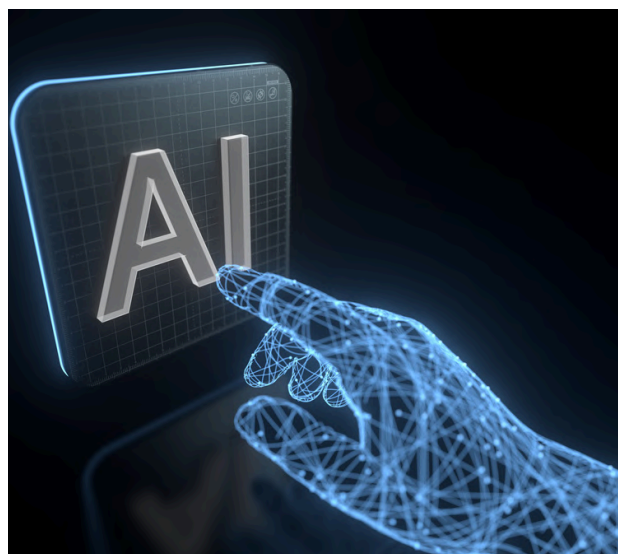




TURN THE PAGE AND YOU
WILL GET TO KNOW ABOUT IT

THE MYTH OF ARTIFICIAL INTELLIGENCE

Humans wonder of artificial intelligence with a mix of fascination and fear, with roots in science fiction and exaggerated media. Preconceived notions about AI overly estimate its capabilities, and leads to myths, like AI having consciousness or being infallible. These misconceptions can create unrealistic expectations and unnecessary anxiety about technology. In reality, many of these myths are easily debunked. AI lacks true consciousness and operates solely based on algorithms and data, with limitations that include biases and errors.



By understanding AI's actual capabilities and constraints, we can better appreciate its potential and acknowledge and solve Artificial Intelligence and its challenges in a more informed and practical manner. Humans are guided by emotions, which enrich our decisions and creativity. In contrast, AI operates on data and algorithms, offering precise support without emotional influence. This balance allows AI to enhance our capabilities while highlighting the unique, irreplaceable value of human emotion in shaping meaningful interactions and creative endeavors.

COMING SOON

Stay tuned for our Future
Events and more issues of
The Byte!

Let's expand our knowledge
in Tech with Technophiles—
after all technology never
stops evolving!