



माधव प्रौद्योगिकी एवं विज्ञान संस्थान ग्वालियर



MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE GWALIOR
DEEMED UNIVERSITY

July-September 2025

THE FUSION FRONTIER

**CENTRE FOR COMPUTER SCIENCE
AND TECHNOLOGY**

E-NEWSLETTER

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E-Newsletter

July-September 2025

Vision

To develop top-tier professionals in Computer Science and Business Systems, nurturing innovations and leadership to bridge the tech-business divide for societal growth and development.

Mission

- **Cultivate Excellence:** Develop world-class computer science and business systems professionals with a strong foundation in both disciplines.
- **Foster Innovation and Research:** Encourage a culture of innovation and support cutting-edge research to develop solutions that bridge the gap between technology and business.
- **Empower Leaders:** Equip graduates with the skills and knowledge to become adept leaders who excel at integrating technology and business solutions.
- **Drive Societal Impact:** Prepare graduates to leverage their expertise for impactful advancements across all spheres of life and society.

Activities Organized (Workshop/Conference/FDP/STC) One-Day Workshop on “Mastering Competitive Success”

The Centre for Computer Science and Technology (CST), Madhav Institute of Technology and Science (MITS), Gwalior, organized a One-Day Workshop on “**Mastering Competitive Success**” on **21st September 2025 (Sunday)**. The session was conducted by **Mr. Govind Sharma, Excise Officer (Network Manager), Excise Department, Gwalior, M.P.** The workshop aimed to guide students on strategies for excelling in competitive examinations and career planning. A total of 69 B.Tech. CSBS students attended the Mandatory Workshop on “Mastering Competitive Success.”



Departmental Activity-VIDYUT

MITS Students Excel at ‘Quiz the Logic, Debate the Vision’

Gwalior, September 27, 2025: The Centre for Computer Science & Technology (CST) at Madhav Institute of Technology and Science (MITS) organized its departmental event ‘QUIZ-BATE: Quiz the Logic, Debate the Vision’ exclusively for CSBS and CST students.

The event comprised two engaging rounds — a Quiz Round, testing participants’ technical knowledge and logical reasoning, and a Debate Round titled “Clash of Ideas, Future of Tech, Voice Your Vision.” Students demonstrated exceptional intellect, critical thinking, and communication skills while discussing emerging technological themes.

The event was coordinated by Dr. Abhishek Dixit, Dr. Devanshu Tiwari, Ms. Aditi Samadhiya, and Mr. Mithun Shrivastava, along with dedicated student coordinators. ‘Quiz-Bate’ exemplified CST’s commitment to fostering innovation, teamwork, and excellence among aspiring technologists at MITS.



Latest Technology

🧠 Open-Source LLMs & Vertical Models: Transforming the Future of Artificial Intelligence

Open-source large language models (LLMs) are transforming the world of artificial intelligence by making advanced technology more accessible, transparent, and customizable.





Recent Examples & Benchmarks

- 📶 **ORANSight-2.0** beats general purpose & closed models on telecom / O-RAN benchmarks.
- 🚢 **Llamarine** -outperforms general LLMs in maritime navigation tasks like trajectory planning, regulatory compliance etc.
- ⚙️ **BitNet**- shows that you can get state-of-the-art (or competitive) results even with aggressive efficiency techniques (1-bit, etc.).





Why They're Important / What's Driving the Trend

- **Transparency & Trust**- Being able to inspect how a model was built, its biases, its training data, etc., helps with accountability and trust.
- **Privacy & Data Control**-Organizations can run models locally (on their own servers / hardware) which helps protect sensitive data, avoid dependency on external API providers.
- **Cost Efficiency & Customization**- Open-source models can be fine-tuned or adapted to specific needs, often reducing cost compared to constant pay-per-use APIs. Also, you can optimize models for your own latency, resource constraints, etc.

Real-World Possibilities

-  Democratizing AI Power – Open models let everyone, from startups to students, build with AI affordably.
-  Industry-Specific Intelligence – Vertical LLMs act as domain experts for healthcare, law, finance, and education.
-  Cost-Effective Innovation – Fine-tuning open models saves on expensive commercial API costs.
-  Enhanced Data Privacy – Companies can host models locally, keeping sensitive data secure.

Challenges Ahead

-  Data Quality Issues – Many industries lack clean, reliable, or accessible training data.
-  High Compute Requirements – Training or fine-tuning still needs powerful (and costly) GPUs.
-  Bias & Fairness Concerns – Poor data can reinforce social or cultural biases.
-  Security & Misuse Risks – Open access can lead to malicious use or manipulation.