

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR **(Deemed University)**

(Declared under Distinct Category by Ministry of Education Government of India)

NAAC ACCREDITED WITH A++ GRADE

AI Insights



Departmental Newsletter: April to June 2025



**Dr. Rajni Ranjan Singh Makwana, Associate Professor
HoD, Centre for Artificial Intelligence**



**Dr. Tej Singh
Assistant Professor**



**Dr. Neelam Sharma
Assistant Professor**

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From the Editorial Desk

“Future of AI and Its Allied Branches Artificial Intelligence (AI) has rapidly transitioned from being a futuristic concept to becoming the driving force of today’s technological revolution. What makes this evolution even more compelling is not AI in isolation, but the ecosystem of allied branches—such as Data Science, Machine Learning, Deep Learning, Robotics, Natural Language Processing (NLP), and Edge Computing—that together shape the future of human progress.

In the coming decade, the convergence of these domains will redefine how industries operate, how societies interact, and how individuals experience technology in daily life. Healthcare will witness AI-powered diagnostics, predictive models for disease outbreaks, and personalized treatment plans. Education will be reshaped by adaptive learning platforms that respond to each learner’s needs. Smart cities will combine IoT, AI, and robotics to optimize energy, transport, and waste management.”

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Students' achievement in extracurricular activity at National or International level



- Divyansh Rahangdale, B.Tech., AIR, student secured the first position in Madhya Pradesh under the Industry 5.0 category. The SRIJAN 2025 exhibition was conducted on 10 and 11 May 2025, at the RGPV Campus, Bhopal, under the guidance Dr. R. R. Singh Makwana and Er. Harshdeep Singh.

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- Yuvraj Tiwari, Moksh Dandotiya, Suyash Khare, Ankit Gurjar, and Team Vritam from MITS-DU Gwalior clinched First Place under the Disaster Management and Emergency Response track at the prestigious IEEE Hacksagon 2025, a national-level hackathon organized by the ABV-IIITM IEEE Student Branch, held in Gwalior from June 27–29, 2025.



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Activities Organized (Workshop) at the Institute Level

- **Dr Tej Singh** and **Dr Pawan Dubey** organized a one-week peer learning workshop on “**Computer Vision**” for newly joined faculty from 1-7 May 2025 at the Centre for Artificial Intelligence.
- **Dr Bhagat Singh Raghuvanshi** and **Dr Abhishek Bhatt** organized a one-week peer learning workshop on “**Data Science**” for newly joined faculty from 22-29 April 2025 at the Centre for Artificial Intelligence.

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Gwalior, Madhya Pradesh, India

66j4+7fx Golden Jubilee Garden Mits, Mela Ground,
Thatipur, Gwalior, Madhya Pradesh 474011, India

Lat 26.230605° Long 78.205998°

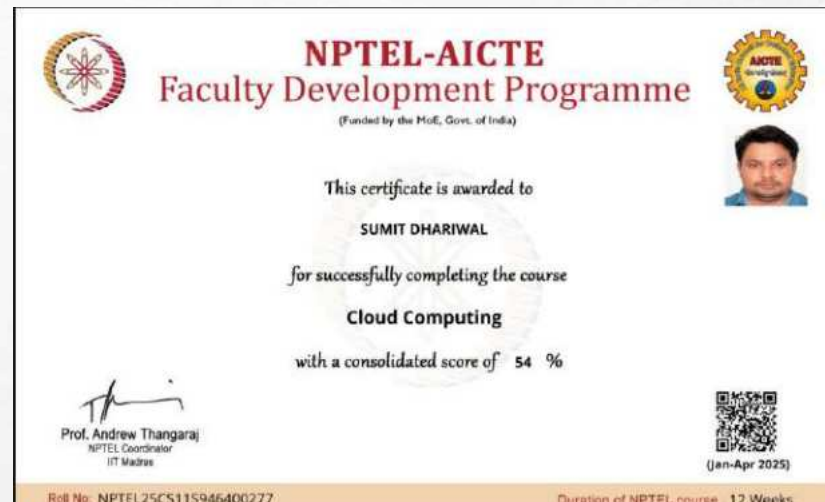
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NPTEL/ATAL/COURSERA/INTERNSHALA Courses Attended

- **Dr. Sumit Dhariwal** attended National Level Capacity Building Programme on "Strategies for Authoring Impactful Research Articles" on 15.06.2025, Organized by ACT Academy, Kerala. Department of Computer Science, Rathinam College of Arts And Science, Coimbatore, Served as Resource Person
- **Dr. Sumit Dhariwal** successfully completed NPTEL course AI In Accounting.
- **Dr. Sumit Dhariwal** successfully completed NPTEL course Cloud Computing.
- **Ramnaresh Sharma** successfully completed NPTEL Machine Learning for Engineering and science applications
- **Dr. Shubha Mishra** attended Infosys Infosys-sponsored 2-week offline training "CEEE Program" organized by INAE, AICTE & IITs from 26 May 2025 to 06 June 2025 at IIT Delhi.

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Book Chapter/Books Published with a DOI

- **Dr. Shubha Mishra** published a journal article on “Development of Optimized Machine Oriented Models” in “AI-based Advanced Optimization Techniques for Edge Computing” in Wiley e-library, DOI <https://doi.org/10.1002/9781394287062.ch3>
- **Dr. Sumit Dhariwal** published a book titled: Learn Cyber Security, Date: 02/06/2025, ISBN-13 : 979-8899294457

Project underway within the department on the institute level

- **Dr. Vibha Tiwari and Dr. Sunil Shukla** have received a research grant of ₹2,98,000 under the Innovative Research Scheme 2025 of Madhav Institute of Technology and Science, Gwalior, for their project entitled “Motor Imagery – AI-based NeuroMotor Fusion for Assistive Rehabilitation.”

Publications SCI/UGC/SCOPUS with a DOI number

- **Dr. Sumit Dhariwal** Published Scopus Publication at 2024 DOI: 10.1109/ARIIA63345.2024.11051739, Article: Decentralized Solutions_Transforming Software Engineering through Blockchain Integration and SmartContract_Automation
<https://ieeexplore.ieee.org/document/11051739>
- **Dr. Sumit Dhariwal** Published Scopus Publication at 2024 DOI: 10.1109/ARIIA63345.2024.11051841 Article: Enhancing Security and Efficiency: A Framework Combining AES, RSA, ECDH, and ECDSA
<https://ieeexplore.ieee.org/document/11051841>
- **Dr. Sumit Dhariwal** Published Scopus Publication at 2024 DOI: 10.1109/ARIIA63345.2024.11051682 Article: Exploring Cloud Deployment Services through Machine Learning: A Focus on AWS
<https://ieeexplore.ieee.org/document/11051682>

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Publications SCI/UGC/SCOPUS with a DOI number

- **Prateek Singh Gurjar**, Piyush Panthi, and Chandan Singh presented a research paper titled “Fall Activity Detection Framework using Deep CNN” at ICIVC 2025, held on June 13–14, 2025, at The ICFAI University, Dehradun.
- **Vaibhav Anuragi**, Ishant Singh, and Tanisha Jain presented a research paper on "Deep Learning-Based Human Activity Recognition Using Smartphone Sensors" at the IEEE 4th World Conference on Applied Intelligence and Computing (AIC 2025), held from 27- 28 June 2025 at New Delhi.
- **Anshika Pandey**, Akriti Kushwaha presented a research paper on "Analyzing the Rise of Depression Among College Students Through AI and Factor Mapping” at the IEEE International Conference on Engineering, Innovations and Technology (ICoEIT-2025), organized by LNCT Group of Colleges, Bhopal, & Technically co-sponsored by IEEE MP Subsection, 4-5 July 2025

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5th International Conference on Intelligent Vision and Computing (ICIVC 2025)

Organized by
The ICFAI University, Dehradun



Certificate of Presentation

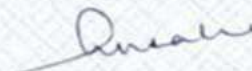
This certificate is awarded to

Prateek Singh Gurjar

who has presented the paper titled **"Fall Activity Detection framework using Deep CNN"**
authored by **Prateek Singh Gurjar, Piyush Panthi, Chandan Singh, Tej Singh** in the 5th
International Conference on Intelligent Vision and Computing (ICIVC 2025) held at **The ICFAI
University, Dehradun** during **June 13 – 14, 2025**.


Puneet Kumar Gupta
General Chair

 **Springer**


Apu Kumar Saha
General Chair

<https://scrs.in/conference/icivc2025>

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**4th 2025 IEEE World Conference on
Applied Intelligence and Computing (AIC 2025)**

Certificate of Presentation

This is to certify that

Vaibhav Anuragi

has presented the paper titled **"Deep Learning-Based Human Activity Recognition using Smartphone Sensor"** authored by **Ishant Singh, Vaibhav Anuragi, Tanisha Jain, Tej Singh** in the **4th 2025 IEEE World Conference on Applied Intelligence and Computing (AIC 2025)** held at The Institution of Electronics and Telecommunication Engineers (IETE), Delhi Centre, India during July 26-27, 2025.

Dr. Harish Sharma
General Chair

Prof. G S Tomar
General Chair

<https://caai.in/conference/aic2025>

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Media Coverage

Printed from
THE TIMES OF INDIA

Tech, health & robots: 'Srijan' displays award-winning projs

May 12, 2025, 12:53 AM IST



Bhopal: A two-day event on innovation, research, and entrepreneurship, titled The Srijan programme, held at Rajiv Gandhi Prodyogiki Vishwavidyalaya (RGPV) was coordinated by the Department of Technical Education and Higher Education, Department of the Madhya Pradesh govt in Bhopal.

The event selected 150 projects from 1,627 submissions across categories like Rural Technology, Clean and Green Energy, Industry 4.0/5.0, Waste Management, Life Science/Health Science, and Smart Education.

The exhibition at the university campus drew thousands of visitors, with 36 projects receiving awards - 25 from technical education and 10 from higher education institutions, supporting India's development goals.

The innovative projects at the event included an AI-based agricultural irrigation system, borewell rescue robot, spine deformity detection system CurveScout, wireless EV charging technology, and face recognition communication systems.

The university will support these innovations through patents, prototype development, mentoring, and startup facilitation.

Inder Singh Parmar, who heads the technical education, higher education, and AVUSH departments, committed to providing additional support for future events, including research infrastructure, mentoring, and patent assistance for innovative projects.

Distinguished guests at the awards ceremony included minister Parmar, Prof. Ashutosh Singh of IIT Bhopal, RGPV vice chancellor Prof. Rajiv Tripathi, registrar Prof. Mohan San, and IIT RGPV director Prof. Sudhir Singh Bhadauria, who presented awards to 36 recipients. Awards worth Rs 20,000, Rs 10,000, and Rs 5,000 were given for first, second, and third positions respectively across six categories, with 36 awards distributed between technical and higher education institutions. Pandit Shambhunath Shukla University Shahdol and Govt Autonomous Holkar Science College Indore received Rural Technology awards. VITM Gwalior and Shri Vaishnav Polytechnic College Indore won in the Clean and Green Energy category. MITS Gwalior and IIT RGPV Bhopal were recognised in the Industry 4.0/5.0 category.

Government PM College of Excellence Sagar and IPS Academy Indore received Waste Management awards. Prime Minister Excellence College Balaghat and LNCT Bhopal were honoured in the Health Science category. The Smart Education awards went to Gyan Ganga Institute of Technology and Science Jabalpur and VNS Group of

राष्ट्रीय प्रौद्योगिकी दिवस

ग्वालियर के टेक्नोक्रेट्स ने तैयार किए ऐसे रोबोट जो आसान करेंगे जिंदगी के काम



ग्वालियर : आज के आधुनिक युग में युवा अपने अनुसंधान और नवाचारों के माध्यम से तकनीकी विकास की दिशा में सक्रिय रूप से योगदान दे रहे हैं। वे आधुनिक तकनीकों में आर्टिफिशियल इंटेलिजेंस, सॉफ्टवेयर, एनर्जी, बायोटेक्नोलॉजी और पर्यावरणीय समाधानों पर काम कर न केवल विज्ञान की दुनिया में नया परिवर्तन ला रहे हैं बल्कि समाज के समझ व्यावहारिक और उपयोगी समाधान प्रस्तुत कर रहे हैं। संस्थानों में विद्यार्थी अपने नवाचारों और नई तकनीकों के माध्यम से अपने भविष्य को दिखा दे रहे हैं।

हुमैनोइड रोबोट अनंत इसानों की तरह समझदार, बोलता भी है: माधव इंस्टीट्यूट ऑफ टेक्नोलॉजी एंड साइंस के विद्यार्थियों दिव्यांश राहगदले और समृद्धि चौहान ने प्रोफेसर डॉ रजनी रज्ज सिंह मकवाना और इंजीनियर हर्षदीप शर्मा के मार्गदर्शन में एआई सक्षम हुमैनोइड हेड रोबोट का निर्माण



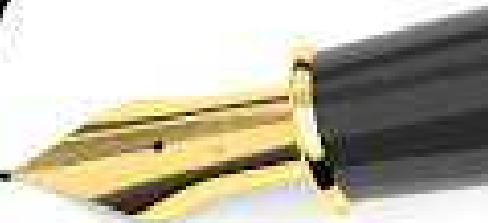
किया जिसका नाम अनंत रखा है। उन्होंने कहा यह विज्ञान और नवाचार के क्षेत्र में उनके लिए बड़ी उपलब्धि है इसकी जानकारी देते हुए विद्यार्थियों ने बताया यह बुद्धिमान रोबोट मानव की तरह बातचीत करता है, प्रश्नों के उत्तर देता है और विभिन्न व्यक्तियों के साथ संवाद कर सकता है। उन्होंने कहा यह मानव मशीन सहयोग का एक आधुनिक उदाहरण है।

स्मार्ट डेस्क असिस्टेंट, मेडिकल रिमाइंडर देने में सक्षम

उन्होंने बताया इसमें सर्वो मोटर्स, 3 डी प्रिंटेड भागों, एआई आधारित नेचुरल लैंग्वेज प्रोसेसिंग का प्रयोग किया गया है। यह रोबोट चेहरे की पहचान, आवाज की पहचान करने में सक्षम है इससे इसका उपयोग सुरक्षा के क्षेत्र में किया जा सकता है। साथ ही यह स्मार्ट उत्तर देने, अभिव्यक्तियां दिखाने में भी सक्षम है जो इसे और अधिक मानवीय रूप प्रदान करता है। वहीं यह आम लोगों की तरह कार्य करने के सहयोग प्रदान कर सकता है जिसमें मेडिकल रिमाइंडर देने, स्मार्ट डेस्क असिस्टेंट की तरह कार्य कर सकता है। उन्होंने कहा वर्तमान समय में अधिकतर कार्य एआई, रोबोट्स के द्वारा किए जा रहे हैं ऐसे में इस तरह के अन्वेषणों से भविष्य में मानव के कार्य सरल हो सकेंगे।

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*Thank
you*



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