July-September 2023

CLAIRVOYANCE

DEPARTMENT OF INFORMATION TECHNOLOGY

E-NEWSLETTER

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

Editorial Board

- Dr. Sanjiv Sharma, Coordinator IT Department
- Dr. Saumil Maheshwari

Contents

- Award/Prize/Recognition by Faculty Members
- Talk delivered outside the Institute
- FDP/STC Attended(Outside the institute)
- Expert Talk organized at Institute Level
- Publications
- NPTEL/ATAL/COURSER/INTERNSH ALA course attended by the faculty
- Student Club Activities organized
- Extension Activity of the Department
- Latest Technologies

Award/Prize/ Recognition by Faculty Members

- **Dr. Sanjiv Sharma** recognized as a member of BOS & subject expert at Computer Science Department, Government Holker Science College Indore dated 11/9/2023.
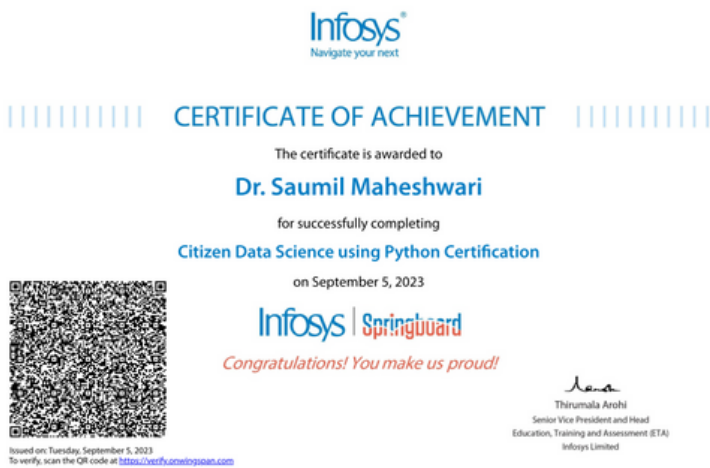
Talk Delivered Outside the Institute

- **Dr. Sanjiv Sharma, Assistant Professor,** IT delivered an expert talk on "Role of Data Mining in Social Media" at Computer Science Department, Government Holker Science College Indore on 11/9/2023.

FDP/STC Attended (Outside the Institute)

- **Dr. Punit Kumar Johari** has participated and successfully completed the 5 days online Faculty Development Program on the theme "AI for Building Speech and Vision Applications Using Python" organized by Galgotias College of Engineering and Technology (GCET, Gr. Noida) from 21ST – 25TH August, 2023.
- **Dr. Abhishek Dixit and Dr. Aditya Dubey** have attended and successfully completed STTP on "Data Science for Beginners" from 04/09/2023 to 08/09/2023 organized by Department of AI&DS, VIIT Pune.
- **Dr. Abhishek Dixit** has participated and successfully completed the 5 days online Faculty Development Program on the theme "AI for Building Speech and Vision Applications Using Python" organized by Galgotias College of Engineering and Technology (GCET, Gr. Noida) from 21/08/2023- 25/08/2023.

- **Dr. Saumil Maheshwari** has successfully completed 6 Weeks (60 hours) Live Online Industrial Training on Citizen Data Science using Python Certification from 31st July to 04th September 2023 conducted by Infosys through Springboard.
- **Dr. Abhishek Dixit and Dr. Aditya Dubey** have attended and successfully completed the online Faculty Development Programme on "Enhancing Research Impact: National FDP on Grant Writing, IPR, and Publication Strategies" from 31/07/2023 to 05/08/2023 organized by School of Technology Management & Engineering NMIMS Indore in association with Central Training – SVKM.
- **Dr. Priyanka Garg** has successfully completed 6 Weeks (60 hours) Live Online Industrial Training on Embedded System with Robotics & IoT Using AWS held on 26 June - 04 August 2023 Organized by EduLakes Solutions LLP In Association with National Service Scheme (NSS) - IIT Roorkee
- **Dr Dhananjay Bisen** has successfully completed one week online FDP on cloud services, AI, ML and Applications (July 24-29, 2023), from Bansal Institute of Engineering and Technology Lucknow (UP) India.
- **Ms. Bulbul Agrawal** has participated and successfully completed the 5 days online Faculty Development Program on the theme "AI for Building Speech and Vision Applications Using Python" organized by Galgotias College of Engineering and Technology (GCET, Gr. Noida) from 21ST – 25TH August 2023.
- **Dr. Aditya Dubey** has participated and successfully completed the 5 days online faculty development program on "Outcome based Curriculum and Accreditation Criteria" from 03/07/2023 to 07/07/2023 organized by NITTTR, Chandigarh.

- **Dr. Aditya Dubey** has participated in and successfully completed the 5 days online Faculty Development Programme on "Bio-Medical Engineering" organized by NITTTR, Kolkata, from 24/07/2023 to 28/07/2023.

Expert Talk organized at Institute Level

- **Dr. Saumil Maheshwari** and **Dr. Abhishek Dixit** delivered a lecture during the Refresher Course on Basics of Computer Science and Emerging Technologies to faculty members, scheduled from 24th July 2023 to 28th July 2023 at MITS, Gwalior.

NPTEL/ATAL/COURSERA/INTERNSHALA course attended by the faculty

- **Dr. Aditya Dubey** Completed certification course on Data Base Management System conducted by NPTEL (July-Sept 2023) with FDP.

"Life is like riding a bicycle. To keep your balance, you must keep moving." - Albert Einstein

Publications

- Varshali Jaiswal, Varsha Sharma, **Dhananjay Bisen**, "Modifed Deep-Convolution Neural Network Model for Flower Images Segmentation and Predictions", Multimedia Tools and Applications, https://doi.org/10.1007/s11042-023-16530-3
- Varshali Jaiswal, Preetam Suman, **Dhananjay Bisen**, "An improved ensembling techniques for prediction of breast cancer tissues" Multimedia Tools and Application (2023). https://doi.org/10.1007/s11042-023-16949-8.
- **Aditya Dubey**, Rahul Ahirwar, Akhtar Rasool, Ankit Kumar, Sachin Mehra, "Employing Transfer Learning and LSTM Networks for COVID-19 Detection via Chest XRay Imagery", Traitement du Signal, Vol. 40, No. 4, 2023, pp. 1319-1328, https://doi.org/10.18280/ts.400402 (SCIE Journal)
- Yamini Richhariya, **Saumil Maheshwari**, "Performance Evaluation of Hiding Algorithms Using Association Rule Mining" Journal of Data Acquisition and Processing, 2023, 38 (3): 7022-7029 . (Scopus Indexed)

Student Club Activities organized

- Digital Learning Group has organized **Parichay 2.0** " A fun interaction with the freshers" on 29th September 2023 under the faculty mentor **Dr. Punit Kumar Johari**.
- Outreach Club has organized a seminar on "The impact of rapid changes in the IT sector on employability" on 27th September 2023 under the faculty coordinator **Dr. Priyanka Garg**.

Extension Activity

- **Dr. Punit Kumar Johari** and **Prof. Rajeev Kumar Singh** have celebrated 1st October as International day for Elderly People at Swarg Sadan, Gadha Gudhi Ka Naka, Gwalior.

Latest Technogies

Metaverse: The Emerging Digital Reality

Description:

The concept of the metaverse has taken the world by storm in recent years, ushering in a new era of digital connectivity and interaction. The metaverse represents a virtual universe where people can work, play, socialize, and create in a shared, immersive online environment. It is not a single technology but a convergence of various cutting-edge technologies, including augmented reality (AR), virtual reality (VR), blockchain, and artificial intelligence (AI), that create a seamless and interactive digital realm.

AR and VR Integration:

One of the key components of the metaverse is the integration of augmented and virtual reality. AR overlays digital information and objects onto the real world, enhancing our physical surroundings with digital elements, while VR immerses users in entirely digital environments. These technologies enable users to navigate and interact with the metaverse in ways that were previously unimaginable.

Blockchain and Digital Ownership:

Blockchain technology plays a crucial role in the metaverse by providing a secure and decentralized infrastructure for digital ownership and transactions. Through blockchain, users can have true ownership of digital assets such as virtual real estate, digital art, and in-game items. This ownership is recorded on a transparent ledger, ensuring trust and authenticity within the metaverse.

Social and Economic Opportunities:

The metaverse offers vast social and economic opportunities. People can gather in virtual spaces to attend events, concerts, or conferences, fostering global connectivity. Moreover, it has given rise to new economic ecosystems where individuals can earn a living by creating, trading, or offering services within the metaverse. Virtual real estate marketplaces, NFT (Non-Fungible Token) art sales, and digital fashion markets are just a few examples of these emerging economic models.

AI-Powered Interactions:

Artificial intelligence powers many aspects of the metaverse, enabling lifelike interactions with digital entities. Chatbots and virtual assistants within the metaverse can engage in meaningful conversations, while AI-driven NPCs (non-player characters) make virtual worlds more dynamic and engaging.

Challenges and Considerations:

While the metaverse holds tremendous promise, it also raises significant challenges. Privacy and security concerns, digital addiction, and the potential for reinforcing existing inequalities are issues that must be addressed as the metaverse continues to evolve. Additionally, the development of open standards and interoperability between different metaverse platforms is crucial for ensuring a cohesive and inclusive digital future.

In summary, the metaverse represents a groundbreaking technological advancement that has the potential to redefine the way we live, work, and play in the digital age. As it continues to develop and mature, the metaverse will undoubtedly shape the future of technology, communication, and human interaction in profound ways.

"If you want to live a happy life, tie it to a goal, not to people or things."
- Albert Einstein