ABV-Indian Institute of Information Technology and Management Gwalior, Morena Link Road, Gwalior, Madhya Pradesh
(An Institute of National Importance, Ministry of Education, Govt. of India)

Department of Electrical and Electronics Engineering

7-Days Self-Sponsored Short-Term Course (Hybrid Mode) on "Role of AI-Powered Techniques for Next-Generation Networks
16 July-22 July 2024

About the Institute

Atal Bihari Vajpayee - Indian Institute of Information Tech-nology & Management Gwalior (ABV-IIITM Gwalior) is India's premier Institute incepted by Ministry of Human Re-source and Development (MHRD), Government of India in the year 1997 as a centre of excellence in the field of Information Technology and Management. It is foremost Institute providing superior quality higher education in the above areas and is located in the city of Gwalior in the northern part of the state of Madhya Pradesh, India. The Institute activities are aimed at developing a culture of inquiry and research through highly competitive academic environment, and close interaction between Institute and corporate world. Vibrant links with the industry are active. Institute is NAAC 'A' certified. It has also been declared as Institute of National Importance by the Government of India.

About The Department

Electrical and Electronics Engineering department was established in the year 2022, Previously it was under Information Technology department established in the year 1997. Since the inception, it is consistently creating its place of excellence not only within the institute but among its counter parts in the country and abroad. Bright students from all the parts of the country for quality education in IT & EC at under graduate, post graduate, and doctoral levels are attracted. The department has highly qualified and competent faculty members, and adequate facilities to support teaching and learning activity.

Course Objectives

- **Understanding Next-Generation Wireless Networks and Various Emerging Techniques:**
Provide participants with the key features of next-generation wireless networks and deliver a foundational understanding of various enabling techniques.
- **Introduction to AI in Wireless Networks:**
Provide an overview of the fundamental concepts of artificial intelligence and its application in the field of wireless communication.
- **AI-Powered Network Optimization:**
Discuss how AI techniques can be used for optimizing the performance of wireless networks, including spectrum management, resource allocation, and load balancing.
- **Demonstrations and Hands-On Sessions:**
Provide participants with hands-on experience through interactive demonstrations, simulations, or practical exercises using AI tools and technologies in the context of wireless networking.
- **Case Studies and Use Cases:**
Present real-world case studies and examples where AI has been successfully implemented in wireless networks, demonstrating its impact and benefits.
- **Challenges and Opportunities:**
Identify and discuss the current challenges and opportunities in deploying AI-driven solutions in wireless networks, fostering a deeper understanding of the practical considerations involved.
- **Collaborative Discussions and Future Directions:**
Facilitate collaborative discussions among participants to identify potential areas for future research, development, and collaboration in the field of AI-powered wireless networks

Who Can Apply

This is a program designed for students, research scholars, professionals, faculty members, and others with an intrest in machine learning. The applicants are also welcome but not limited to B.Sc./M.Sc., BBA/MBA, B.E./B.Tech., M.E./M.Tech., PhD., working professionals from start-ups, MSMEs, and others.

Registration Link

Register using any one of the following:

1. Use the link below:

https://forms.gle/gD5rbm7rPn9FwH9c9

2. Scan the QR code

Topics to be Covered

- **Module-1.** Introduction to Next-Generation Wireless Networks, Emerging Techniques and Challenges.
- **Module-2.** Fundamentals of Artificial Intelligence in Wireless Networks.
- **Module-3**. Emerging Techniques: NOMA, IRS, and UAVs etc.
- **Module-4**. Security and Privacy in AI-Powered Networks.
- **Module-5.** Network Optimization and Resource allocation Management with AI.
- **Module-6.** Case Studies and Real-World Implementations: Successful Implementations of AI in Wireless Networks
- **Module-7.** Challenges, Future Directions, and Hands-On Exercise.

Course Details

Mode of the course: Online/Hybrid
Timing: 16th July to 22nd July 2024
Session 1: 11:00 A.M. to 12:30 PM
Session 2: 2:30 PM - 4:00 PM
E-Certificate will be provided to all the participants.

Resourse Persons

Faculty Members from IITs, IIITs, NITs, and Industry experts shall deliver lectures and hands-on.

Course Coordinators

- Dr. Pragya Swami, ABV-IIITM Gwalior (9008391562, pswami@iiitm.ac.in)
- Dr. Binod Prasad, ABV-IIITM Gwalior (7001940890, binod@iiitm.ac.in)
- Dr. Vinal Patel, ABV-IIITM Gwalior (9586288218, vp@iiitm.ac.in)
- Dr. I.A. Ansari, ABV-IIITM Gwalior (9109106995, iaansari@iiitm.ac.in)

Bank Details

Bank Account Details
Account Name: ABV IIITM FDP Account
Account Number: 945210110009380
Name of the Bank: Bank of India
IFSC Code: BKID0009462
Bank address and Branch: IIITM Branch, Gwalior

Registration Fee

Category	Online Registartion Fee	Offline Registration Fees
Research Scholars/PG/UG (3rd Year Onwards) Student	Rs. 1500/-	Rs. 5000/- (Including Accommodation and Food)
Faculty from Institutes/Universities/Colleges	Rs. 2000/-	
Engineers from Industry and R&D Organizations	Rs. 2500/-	