Key Topics:

- Introduction to Smart Agriculture
- Artificial Intelligence in Agriculture
- IoT Applications in Agriculture
- Big Data and Analytics in Agriculture
- Sustainable Agricultural Practices

Objectives of the FDP:

- To introduce faculty members to the latest AI, IoT, and Big Data technologies in agriculture.
- To enhance understanding of precision farming and smart irrigation techniques.
- To explore the role of data analytics in agricultural decision-making.
- To discuss sustainability challenges and solutions in modern agriculture.
- To provide hands-on experience with AI models, IoT sensors, and data visualization tools.

Eligibility: Faculty Members of the AICTE approved participants from institutions, research scholars, PG Scholars, Government, Industry (Bureaucrats/Technicians/ Participants from Industry etc.) and staff of host institutions. Not more than 30% from Host Institution.

Registration: There is No Registration Fee. To join this Offline FDP, you are requested to register your name by clicking the registration link:

https://www.aicte-india.org/fatal
Resource Person: Academicians and Industry Experts.

Note: The Certificates shall be issued by AICTE Training and Learning (ATAL) academy to those participants who have attended the program with minimum 80% attendance and scored minimum 60% marks in the test conducted at the end of the FDP**.**

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT, BALLARI, KARNATAKA
Autonomous Instituted under VTU, Belagavi

ONE WEEK ATAL FDP 2025–26

ON

"Smart and Sustainable Agriculture: Leveraging AI, IoT, and Big Data for Societal Impact"

**Sponsored by ATAL
(AICTE Training & Learning Academy)
15-20, September 2025**

**Organized by
Department of CSE(Data Science)**

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About BITM:

Ballari Institute of Technology & Management, Ballari was established in the year 1997 with a sole objective to provide quality & affordable education in this backward district of Karnataka. The campus is spread over 11 acres of greenery with eco-friendly surroundings, has facilities that are a A class apart, combining aesthetics with modernity. As per the report of D.M. Nanjundappa (Deputy Chair of the Karnataka State Planning Board), in the year 2013, Govt. of India has given special status under Article 371-10 until the education system in this Kalyana Karnataka (Hyderabad -Karnataka Region).

BITM is an Autonomous Institute under VTU, Belagavi. Institution has actionable outcome based education across the institute & has successfully obtained M&A for Grade with CGRA of 3.27 and NBA Accreditation for 5 UG Programs (i.e., CSE, ECE, ME, EEE & Civil).

To adhere to quality, institution is ISO certified since 2005 & currently follows a adherence to ISO conditions as stipulated by the ISO 9001:2015. Institution conforms to the demanding international standards by creating & implementing a Quality Management System.

About Dept:

Data Science (CSE-DS) offers a 4-year undergraduate program. It's considered one of the best branches in the field of technology under CSE. This program opens up a wide range of job opportunities in various fields. Data science is a top branch of computer science, and it's growing fast. It's one of the most popular career paths in the tech world right now. The Department of Computer Science and Engineering - Data Science was founded in the academic year 2022-23. Since then, it has flourished, boasting a team of highly qualified and dedicated faculty members.

The department has evolved from its modest origins to become fully operational, with state-of-the-art laboratories and infrastructure in place. It encourages collaboration among faculty members, enabling them to stay updated with the latest advancements and refine their skills to meet the needs of industry and technology.

About FDP:

The rapid advancements in technology are revolutionizing agriculture, making it more efficient, productive, and sustainable. Artificial Intelligence (AI), the Internet of Things (IoT), and Big Data are driving innovations in precision farming, smart irrigation, automated monitoring, and data-driven decision-making. This Faculty Development Program (FDP) aims to equip educators, researchers, and professionals with the knowledge and skills necessary to leverage these technologies for societal and environmental impact.

EVENT SCHEDULE

DAY 1

- Data-Driven Agriculture: AI and Big Data for Sustainable Growth by **Dr. Tripti Swarnkar, Professor, Department of Computer Applications National Institute of Technology, Raipur Raipur-492010, Chhattisgarh, India**
- An Adaptive AI-Enhanced Technique for Crop Monitoring using IoT by **Dr. Jagadish R M, Professor, Department of CSE(Data Science), Ballari Institute of Technology & Management, Ballari**
- AI-Driven Crop Monitoring and Disease Detection and Hands on by **Mr. Sanjay B, Chief Executive Officer, Contriver, Bengaluru**

DAY 2

- Big Data, and advanced analytics by **Dr. Dinesha H A Founder chairman & Director, Cybersena (R&D) India Pvt, Ltd. Bangalore**
- Sustainable AI-Based production agriculture: Exploring AI Applications in agricultural Practices by **Dr. Suresh Y Professor & Head, Department of CSE(Artificial Intelligence), BITM, Ballari.**
- Google Cloud and ML Offerings and hands on session by **Mr. Abhilash Neeraty, Senior Solution Architect, Wipro Solutions Private Limited, Hyderabad**

DAY 3

- Role of computational model in mapping genotype interaction to phenotype traits in reference to Maize plants by **Dr. Rupam Kumar Sharma, Professor, Department of Computer Science Engineering, Rajiv Gandhi University (Central University) Arunachal Pradesh.**
- Drone Based crop disease detection using by **ML Dr. Renuka Sagar, Professor, Department of Artificial Intelligence & Machine Learning, BITM Ballari**
- Advancements in Quantitative Trait Locus (QTL) Mapping for Maize Traits Using Computational Models and Hands on by **Dr. Rupam Kumar Sharma, Professor, Department of Computer Science Engineering, Rajiv Gandhi University (Central University) Arunachal Pradesh.**

DAY 4

- Application of Nanotechnology in Food Processing by **Dr. Sharanagouda Hiregoudar, Professor and Head, Dept. of Processing and Food Engineering and Centre for Nanotechnology UAS, Raichur 584104, Karnataka, India.**
- Fruit Quality Prediction using computer vision by **Dr. Aradhana D, Professor & Head, Department of CSE(Data Science), BITM, Ballari**
- Empowering Smart and Sustainable Farming through IoT Innovations by **Mr. Raymond Irudayaraj I, Technical Lead, Raylog Autonetics Pvt. Limited, Bengaluru, Karnataka**

DAY 5

- **Industrial Visit Krishi Vigyan Kendra, Hagari, Ballari, Karnataka** under the administrative control of University of Agricultural Sciences, Raichur with an 100 per cent financial assistance by the ICAR, New Delhi.
- Role Of AI And Block chain In Building Next Generation Agri Technology by **Dr. Siba Narayan Swain, Professor, Department of Computer Science Engineering, Indian Institute of Technology Dharwad, Karnataka .**
- Hands-On by **Dr. Siba Narayan Swain, Professor, Department of Computer Science Engineering, Indian Institute of Technology Dharwad, Karnataka**

DAY 6

- IoT and Edge AI in Smart Farming by **Dr. Manjunatha Kumar B H, Professor & Head of the Department, CSE, S J C INSTITUTE OF TECHNOLOGY, Chickballapur - 562101, Karnataka**.
- Hands-On by **Mrs. Tejashwini S.G Team Lead Accenture, Bangalore.**

- **MCQs and Reflection Journal**
- **Valedictory Session**

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT

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