

## ABOUT THE AICTE

All India Council for Technical Education (AICTE) was set up in November 1945 as a national-level apex advisory body to conduct a survey on the facilities available for technical education and to promote development in the country in a coordinated and integrated manner and to ensure the same, as stipulated in the National Policy of Education (1986).

## ABOUT THE INSTITUTE

IPS College of Technology and Management was established in the year 2007, aiming to become the most preferred engineering college in central India for students to obtain a world-class engineering education, and develop into the leaders of tomorrow. IPSCTM endeavors to make the students technologically superior and ethically strong, who in turn, shall contribute to the advancement of society and humankind.

## ABOUT THE DEPARTMENT

The Department of Computer Science and Engineering was established in the year 2007 to develop professionals equipped with the knowledge and skills to meet the needs and challenges of the dynamic field of Computer Engineering. The Department boasts a team of quality, full-time faculty members engaged in teaching, learning and research.

Regarding infrastructure, the Department of Computer Science is fully equipped with high configuration systems and a fully networked campus with high-speed internet connectivity, which gives our faculty and students an edge over their counterparts.

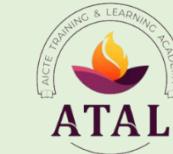
## ABOUT THE PROGRAM

The ATAL Online Faculty Development Program (FDP) on "GenGeoAI" is a 6-day intensive training initiative aimed at empowering faculty, researchers, and professionals with cutting-edge knowledge and practical skills in the integration of Generative Artificial Intelligence (AI), Geographic Information Systems (GIS), and smart technologies in the domain of sustainable agriculture.

This program is organized under the aegis of the AICTE Training and Learning (ATAL) Academy, a flagship initiative of the All India Council for Technical Education, which strives to enhance teaching and research capabilities across India.

. The course is designed to be beneficial for applications in research, industry, and academia.

## Six-day Faculty Development Program (Online Mode)



On

## "GengeoAI: Synergizing Generative AI, GIS, and Smart Technologies for Sustainable Agriculture"

November 24-29, 2025

Organized by

**Department of Computer Science & Engineering**



**IPS College of Technology & Management, Gwalior, M.P, India-474001**

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## COURSE OBJECTIVE

The objectives of this faculty development program is to enrich the knowledge of participants in Generative AI and its application in agriculture

- To introduce the fundamentals and advancements in Generative AI and its application in agriculture.
- To explore GIS-based spatial data analysis for precision farming and smart land-use planning.
- To integrate smart sensors, IoT devices, and AI algorithms for real-time agricultural monitoring.
- To enable faculty and researchers to develop interdisciplinary research in GenAI, GIS, and sustainability.
- To promote the concept of sustainable agriculture through technology-driven innovation.

- To provide hands-on training on AI tools, GIS software, and open-source platforms for agri-tech solutions.
- To familiarize participants with remote sensing data and satellite imagery for crop and resource monitoring.
- To build capacity for AI-driven climate modeling and disaster preparedness in agriculture.
- To enhance participants' understanding of data ethics, AI policy, and privacy in the agricultural domain.
- To equip participants to design and implement smart farming systems using integrated technologies.
- Design and prototype AI-based tools for solving agriculture-related problems using Python, TensorFlow, or open-source platforms.
- Utilize satellite and drone-based imagery for crop health assessment, soil mapping, and drought/flood risk analysis.
- Contribute to sustainable farming initiatives through technology-based decision-making, smart resource management, and policy alignment.
- Demonstrate proficiency in using platforms like QGIS, Google Earth Engine, and GenAI tools for agricultural innovations.

## COURSE OUTCOMES

After successful completion of this FDP, participants will be able to:

- Understand and apply the core principles of Generative AI (GenAI) and explore its relevance in modern agriculture and rural innovation.
- Analyze spatial data using GIS and remote sensing tools for practical applications in precision agriculture and environmental monitoring.
- Develop integrated solutions using AI, IoT, and smart technologies for real-time crop monitoring, yield prediction, and resource optimization.

## CONTACT PERSONS

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## IMPORTANT DATES:

- Last date of Registration: November 15, 2025
- Notification: November 20, 2025

## ELIGIBILITY AND REGISTRATION

The faculty members of the AICTE approved institutions and UGC approved institutions and from private universities.

## GUIDELINES

- No participation registration fees.
- Each participants has to register online on AICTE-ATAL portal for joining the course.
- Eligible participants will be selected and approved.
- The certificates shall be issued to those participants who are registered on ATAL portal [www.aicte-india.org/atal](http://www.aicte-india.org/atal) and attend the program with minimum 80% attendance.
- It is compulsory for each participant to fill the Feed-back form for getting certificate.

## COURSE CONTENTS

- ✓ Deep Learning in Multidisciplinary Applications
- ✓ AI in Healthcare
- ✓ AI-Based Motion Control
- ✓ AI & Human Intelligence: Collaboration or Competition?
- ✓ Data Prediction Using Supervised Learning

- ✓ ML for Sustainable Development
- ✓ Remote Sensing Technologies for Agriculture
- ✓ Smart Farming with UAV and AI.
- ✓ Data Storage with Cyber-Resilience
- ✓ Redefined Computer Architecture for AI

### Chief Patron

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Honourable Chairperson,  
IPS GOC

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**Mr. Ashwini Mishra,**  
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