About IIRS

The **Indian Institute of Remote Sensing (IIRS)**, under the **Indian Space Research Organisation (ISRO)**, **Department of Space, Government of India**, is a premier institute dedicated to capacity building in **Remote Sensing, Geoinformatics, and GNSS technologies** for natural resources, environment, and disaster management. Established in 1966 as the Indian Photo□interpretation Institute (IPI), it was the first of its kind in South-East Asia. Over the years, IIRS has expanded its programs from training mid-career professionals to offering diverse courses for fresh graduates, researchers, policymakers, and academia, while also providing online learning through its **e-learning platform** (http://elearning.iirs.gov.in).

Photogrammetry & Remote Sensing Department

Photogrammetry and Remote Sensing Department (PRSD) established in 1966 is imparting professional training in the field of AI/ML, photogrammetry, remote sensing, GNSS and image processing. It has successfully executed a number of M.Tech/M.Sc/PGD research projects. Guiding large number of Ph.D/Research scholars in the area of AI/ML for crop analytics, forest species, BIM, SAR etc. The ongoing/ completed research projects at PRSD are large number of ML/DL models, UAV data Processing for terrain information extraction, LiDAR-RS, SAR Tomography, SAR Calibration, Hyperspectral Remote Sensing, Automated features extraction, Large scale mapping, etc.

Importance of Course

In India, where agriculture sustains nearly half the population, **AI and ML in agriculture analytics** play a vital role in tackling challenges like climate change, resource management, and food security. These technologies enable **crop monitoring, yield forecasting, soil and water management, and precision farming**, while also supporting government schemes such as **Digital Agriculture Mission and PM-Fasal Bima Yojana.** By empowering farmers, guiding policymakers with data-driven insights, and promoting sustainable practices, AI/ML is central to achieving **self-reliant, climate-smart, and food secure agriculture in India.**

Contact Details

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INDIAN SPACE RESEARCH ORGANIZATION
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Five Days Short Course

AI/ML for Agriculture Analytics

April 20-24, 2026

Organised by

INDIAN INSTITUTE OF REMOTE SENSING

INDIAN SPACE RESEARCH ORGANISATION DEPARTMENT OF SPACE, GOVT. OF INDIA DEHRADUN

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About the Course

The course on **Artificial Intelligence (AI) and Machine Learning (ML) for Agriculture Analytics** is designed to equip students, researchers, and professionals with cutting-edge skills in applying data-driven technologies to solve real-world challenges in agriculture. With the increasing availability of range of satellite imageries, sensor networks, drones, and farm-level data, AI and ML are transforming how we understand, monitor, and optimize agricultural systems. This program bridges the gap between advanced computational techniques and agricultural applications, providing both **theoretical foundations** and **hands-on exposure, with real field data collection** to analytical tools.

Curriculum

- Fundamentals of Remote Sensing
- Types of Remote Sensing Sensors
- Importance of Indices
- Concepts of AI/ML Models
- Crop Field Data Collection
- Concepts of Temporal Remote Sensing
- Concepts of Multi-Sensor Remote Sensing
- Crop monitoring (Sowing/Harvesting)
- Concepts & Disease Crop Fields Mapping
- Specific Crop Acreage
- Specific Crop Yield and Production Estimation

Expected Outcome

At the end of this course, participants will gain both **theoretical and practical expertise** in applying AI/ML models for agriculture analytics. They will develop skills in **crop analytics, remote sensing technology, crop field data collection, and crop mapping** related to sowing, harvesting, acreage estimation, and yield prediction. The course will also provide exposure to different **types of remote sensing datasets** along with hands-on practice in various **Machine Learning (ML) and Deep Learning (DL) models,** enabling participants to translate data into actionable insights for smart and sustainable agriculture.

Target Participants

This course is ideal for: **Professionals** working in agriculture, AgriTech, and AI/ML applications. **Researchers & Academicians** exploring AI-driven agricultural solutions. **Ph.D. Scholars & Postgraduates** from Computer Science, Agriculture, Data Science, Environmental Sciences, and Geoinformatics etc. **Policy Makers & Development Practitioners** interested in digital agriculture and food security. **Industry Innovators & Startups** aiming to build AI/ML-based AgriTech products.

Course Fee

Course fee for attending this course is 65,00/-

Facilities Included

Registration Kit: Course material, stationery, and software access

Field Visits: Practical exposure to agriculture data collection and analytics workflow

Certification: Participants will receive a certificate upon successful completion

Boarding & Lodging and Meals has to be borne by participants

Course Registration & Fee Payment

Register from following portal **https://admissions.iirs.gov.in/coursecalender** After application selection and confirmation participants can pay fee

Last Date of Application : February 15, 2026,17:30Hrs.

Selection Criteria: Working professionals first preference, Research scholars/Ph.D second, post-graduate third.