

IIRS Outreach Programme

The IIRS outreach programme, which was started in 2007 with 12 universities/ institutions has now grown substantially to 3000+ network institutes. The beneficiaries of the programme may include:

- Central/State/Private Universities & Academic Institutions
- Central & State Government Departments
- Forest Resource Professionals
- State Forest Departments/Forest Training Academies
- Research Institutes
- Geospatial Industries
- NGOs

Feedback Mechanism

IIRS has conducted eleven workshops in 2007, 2009, 2010, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021 and 2022 to take feedback from participating institutions to improve the quality of future courses.



Awards

IIRS has received national awards for excellence in training for outreach and e-learning programme during 1st National Symposium on Excellence in Training conducted during April 11-12, 2015 in New Delhi by Department of Personnel & Training (DoPT), Govt. of India in collaboration with United Nations Development Programme (UNDP).



About course

Indian Institute of Remote Sensing (IIRS) under Indian Space Research Organisation (ISRO), Department of Space, Govt. of India is a premier Training and Educational Institute set up for developing trained professionals in the field of Remote Sensing, Geoinformatics and GNSS Technology for Natural Resources, Environmental and Disaster Management. Formerly known as Indian Photo-interpretation Institute (IPI), founded in 1966, the Institute boasts to be the first of its kind in entire South-East Asia. While nurturing its primary endeavour to build capacity among the user community by training mid-career professionals, the Institute has enhanced its capability and evolved many training and education programmes that are tuned to meet the requirements of various target groups, ranging from fresh graduates to policy makers including academia.

IIRS also conducts e-learning programme on Remote Sensing and Geoinformation Science (<http://elearning.iirs.gov.in>).

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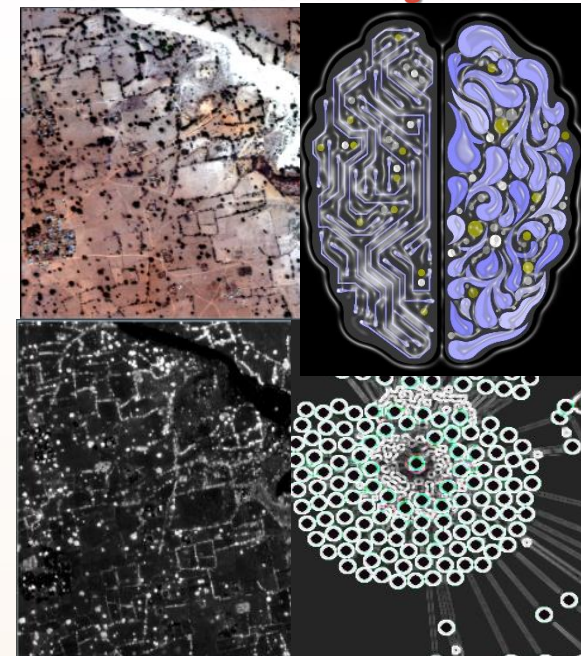
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98th IIRS Outreach Programme



**Artificial Intelligence (AI) for Earth
Observation (EO) and Geodata Handling
and Processing**

May 02 - 13, 2022



Organised by

Indian Institute of Remote Sensing
Indian Space Research Organisation
Department of Space, Govt. of India
Dehradun

www.iirs.gov.in

About the Course

Earth Observation (EO) and Geospatial data have wide-ranging applications. The different geospatial data sources generate a high volume, while the complexity of EO data requires the application of novel AI algorithms. AI-based computer vision models have emerged as effective and efficient tools to analyze and extract essential insights from EO imagery data. However, to use them effectively or to evaluate and improve other methods basic understanding of principles is needed.

The course provides a careful balance between basic theoretical and applied AI techniques for geospatial data. It provides an overview of the basic map of AI computation for extraction feature from satellite data.

Curriculum

- Understanding the different tasks of Geospatial AI
- Overview of the theoretical basis of different AI tasks such as training, algorithm, evaluation optimization
- Geospatial data handling in python for AI preprocessing with a demonstration
- Familiarization with a computational framework for creating the AI models for data visualization

Expected Outcome

It should allow the participants to choose an appropriate method to achieve the basic geospatial EO data tasks such as pixel and object-based classification based on the data's temporal and spatial attributes.

Target Participants

The candidates who want to participate in should be a postgraduate or final year postgraduate student of Geosciences. Scientific Staff of Central/State Government/Faculty/researchers at university/institutions are also eligible to apply for this course. Applications of participants have to be duly sponsored by university/institute and forwarded through coordinators from respective centres. Users receiving programmes under CEC-UGC/ CIET networks can also participate. Institutions on high speed National Knowledge Network (NKN).

Course Pre-requisite

- Basic of Python programming
- Understanding of basic of remote sensing and GIS
- Access to google free Colab platform. ([Resource](#))

Course Study Material

Course study materials like lecture slides, video recorded lectures, open source software & handouts of demonstrations, etc. will be made available through e-class. Video lectures will also be uploaded on e-class (<https://www.eclass.iirs.gov.in/login>).

Course Fee

There is no course fee for attending this programme.

Course Registration

- Course updates and other details will be available on URL- <http://www.iirs.gov.in/Edusat-News/>
- To participate in this programme the interested organizations/ universities/ departments/ Institutes has to identify a coordinator at their end. The identified coordinator will register online his/her Institute as nodal center in IIRS website.
- All the participants have to register online through registration page by selecting his/her organization as nodal center.

Course Funding & Technical Support

The programme is sponsored by Indian Space Research Organisation, Department of Space, Government of India.

Programme Reception

Programme can be received through e-class platform of IIRS-ISRO using internet connectivity. No specific hardware/software required. However, it is recommended good internet connectivity at user end. To run the programme in class room, following hardware will be required:

- Desktop computer with web camera microphone and output speakers or laptop with microphone camera and output speaker.
- Large display screen/projector/TV.

Important links

Courses updates and other details will be available on URL – <https://www.iirs.gov.in/EDUSAT-News>

To participate in this programme the interested organisations/universities/departments/institutes have to identify coordinator at their end. The identified coordinator will register online his/her institute as nodal centre in IIRS website

(<https://elearning.iirs.gov.in/edusatregistration/coordinator>)

All the participants have to register online through registration page by selecting his/her organization as nodal centre.

<https://elearning.iirs.gov.in/edusatregistration/student>

Award of Certificate

Working Professionals and Students: Based on 70% attendance

There are limited number of seats. Registration will be done on first come first serve basis