IIRS Outreach Programme

The IIRS outreach programme, which was started in 2007 with 12 universities/ institutions has now grown substantially to 3400+ 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 takes continuous feedback from participating institutions to improve the quality of future courses.

Feedback session during IIRS User Interaction Meet (IUIM)-2023

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 IIRS

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*).

Contact Details

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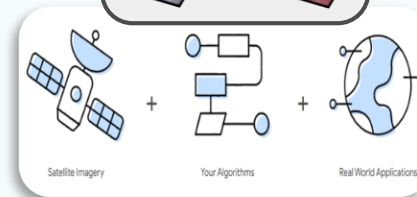Course Director and Head, GIT&DL

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135th IIRS Outreach Programme

Geospatial Analysis using Google Earth Engine
February 19-23, 2024

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

Today large amount of satellite imagery and geospatial data collected from different sources is available at free of cost. Satellite imagery combined with power of Geographic information System can be a great tool for supporting environmental management, disasters, global climate change, natural resources, wildlife, land cover and many other applications. Cloud based solutions like Google Earth Engine provide processing these satellite images.

Processing this vast amount of data in time and space efficient manner in cloud platform and deriving useful information and knowledge from data is one of the most challenging aspect of geospatial technology.

We invite you to attend this training program on Geospatial Analysis using Google Earth Engine. The course is scheduled from February 19-24, 2024.

Curriculum

- Overview of Google Earth Engine
- Time Series Visualization of Optical Multispectral Data
- Feature Extraction using Spectral Band Rationing.
- Feature Extraction Using Machine Learning Algorithms.
- Data Downloading and Uploading for area of interest-based processing.

Expected Outcome

At the end of this course participant must be able to

- Write program in GEE to read, write and process different satellite images and products.
- Write program in GEE to generate various ratio images like NDVI, EVI etc.
- Write a script in GEE for Machine Learning algorithm based Satellite Image LULC classification.
- Able to upload study area boundaries in GEE and perform specific analysis and download the data form GEE.

Target Participants

The candidates who want to participate in the course should be students of a final-year undergraduate course or postgraduate course (any year) and citizens of India.

Course Pre-requisite

- Knowledge of Basics of Remote Sensing and GIS

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/**

•**Registered through Nodal centres.** The participant's registration must be approved by the coordinator of nodal centers.

•The participants can register and see their application status through URL-

https://elearning.iirs.gov.in/edusatregistration/ . In case, the application is pending for approval then participants are advised to contact the coordinator of respective nodal center.

Registered as "Individual registrations"-

•The participants with individual registration will be automatically approved. All the registered participants will get their login credentials for ISRO Learning Management System (LMS)- https://isrolms.iirs.gov.in

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

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)

Award of Certificate

Registered through Nodal centres : Based on 70% attendance, students will be awarded a "Courses Participation Certificate."

Individual Registration: A "Course Participation" certificate will be given to everyone who devotes at least 70% of each session's hours to the course. The course participation certificate will be available for download in ISRO LMS.

There are a limited number of seats.
Registration will be done on a first-come, first-served basis.