

## IIRS Outreach Programme

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

- Urban Planning Bodies/ Agencies in India
- Civil Engineers
- Architects and other Planning Professionals
- Central/State/Private Universities & Academic Institutions
- Central & State Government Organisations / Departments
- Research Institutes
- Geospatial Industries
- NGOs

## Feedback Mechanism

IIRS has conducted workshops and sessions during IIRS User Interaction Meet to take feedback from participating institutions to improve the quality of future courses.



IIRS Outreach programme feedback session during IIRS Academia Meet (IAM)-2019

## Awards

IIRS has received national awards for excellence in training for outreach and e-learning programme during 1<sup>st</sup> 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

**Dr. Anil Kumar**  
Course Coordinator and Head, PRSD  
Tel: 0135-2524114  
Email: [anil@iirs.gov.in](mailto:anil@iirs.gov.in)

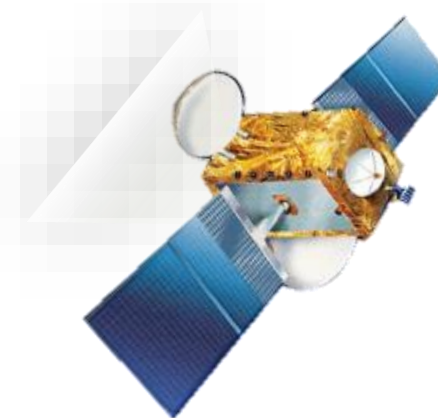
**Dr. Harish Karnatak**  
Head, GIT & DL Dept.  
Tel: 0135-2524332  
Email: [harish@iirs.gov.in](mailto:harish@iirs.gov.in)

**IIRS DLP Team**  
**Dr. Poonam S. Tiwari**  
Programme Coordinator

**Janardan Vishwakarma**  
&  
**Ashok Ghildiyal**  
Tel: 0135-2524130  
Email: [dlp@iirs.gov.in](mailto:dlp@iirs.gov.in)

**Indian Institute of Remote Sensing,**  
Indian Space Research Organisation  
Department of Space, Govt. of India,  
4-Kalidas Road, Dehradun  
Email: [dlp@iirs.gov.in](mailto:dlp@iirs.gov.in)

## Five days Online Short Course on



## Machine Learning to Deep Learning: A Journey for Remote Sensing Data Classification and Detection

July 4 - 8, 2022



Organized by

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

[www.iirs.gov.in](http://www.iirs.gov.in)

# About the Course

Main core utilization of remote sensing data is for landuse / landcover map generation. Further it has been tried to increase capability of remote sensing data to extract single class of interest. Also to map different stages within a given class, generate information about specific class of interest in time domain. In today's scenario various remote sensing sensor's data is available, it gives an opportunity to integrate these multiple sensor data in a given application, to extract specific class level information. So it's important to explore machine/deep learning algorithms to extract specific class level information from multi-sensor temporal remote sensing data sets....

We invite you to attend this five days short course on Machine learning to Deep Learning: A journey for remote sensing data classification. The short course is scheduled from July 4, 2022..

## Short Course Contents and Schedule

### 4<sup>th</sup> July 2022

**(16.00Hrs-17.30Hrs)** - Remote Sensing and its sensors of various resolutions. Radiometry and Geometric corrections and Basic understanding of Image.

### 5<sup>th</sup> July 2022

**(16.00Hrs-17.30Hrs)** - Basic classifier to Machine Learning – A Journey.

### 6<sup>th</sup> July 2022

**(16.00Hrs-17.30Hrs)** - Methods in Machine Learning: Supervised, Unsupervised and Reinforcement.

### 7<sup>th</sup> July 2022

**(16.00Hrs-17.30Hrs)** - Fuzzy based machine learning with application in Temporal data processing.

### 8<sup>th</sup> July 2022

**(16.00Hrs-17.30Hrs)** - Network based Learning algorithms – ANN to CNN/RNN

# Target Participants

This short course is designed for professionals engaged in remote sensing data processing in different applications. Where they are extracting specific class of interest and further wants to learn fuzzy machine/deep learning concepts.

## Course Study Material

Short course study materials like lecture slides, video recorded lectures, & handouts of demonstrations, etc. will be made available through IIRS ftp link. Video lectures will also be uploaded on YouTube Channel (<http://www.youtube.com/user/edusat2004>).

## Short Course Fee

There is no course fee for attending this programme.

## Short Course Registration

Course updates and other details will be available on URL- <http://www.iirs.gov.in/Edusat-News/>. All the participants has to register online through registration page available on above web page.

# Course Funding & Technical Support

The programme is sponsored by IIRS, Indian Space Research Organisation, Department of Space, Government of India, Dehradun and is conducted with due technical support from Amrita Virtual Interactive E-learning World (A-VIEW).

## Programme Reception

Programme can be received through Internet connectivity of 2Mbps or better. Following hardware and software set-up is required at user end:

### Hardware Requirements :

- High-end Computer/Laptop (Windows OS);
- Good quality web camera;
- Headphone with Microphone;
- Speakers;
- Large Display Screen (Projector or TV) .

### Software and Internet Requirements

- IIRS Learning Management System.(Internet Based platform)

### Connectivity & Other configurations:

- NKN or any other high speed internet facility (preferably without firewall, with minimum of 2 Mbps bandwidth).

**Note:** Institutions/ Universities have to bear total expenses for establishment of the classroom facility.

## Award of Certificate

**Working Professionals and students :** Based on 70% attendance