Geoprocessing using Python

1.   Introduction:

Geospatial technology is an emerging field of technology with a unique blend of Remote Sensing (RS), Geographic Information System (GIS) and Global Satellite Navigation System (GNSS). Today large amount of satellite imageries and geospatial data collected from different sources are available at free of cost to the user communities. Satellite imagery combined with power of Geographic information System can be a great tool for supporting environmental management for natural hazards and disasters, global climate change, natural resources, wildlife, land cover and many other applications. Processing this vast amount of data in time and space efficient manner and deriving useful information and knowledge from data is one of the most important and challenging aspect of geospatial technology.

Python programming language has emerged as one of the most powerful language for development of software applications for geo-spatial data analysis and processing. Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting language to connect existing components together.

The course on "Geoprocessing Using Python" is designed for the students, researchers and working professionals of geospatial science and technology to enhance their skills in handling geo-data using Python programming language. During the course, the learners will understand the concept of geoprocessing through numerous examples *viz.* manipulating, resampling, re-projecting and analysing raster data, handling vector data, editing geometries, working with projections etc.

2.   Course Contents:

Following major topics will be covered during the course.

S. No	Topic	Number of Session (s)
1.	Fundamental of Geo-processing techniques and its applications	01
2.	Introduction to Anaconda, & Jupyter Notebook	01
3.	Introduction to Python programming language	01
4.	Introduction to geodata and spatial analysis	01
5.	Introduction to Numpy and data visualization	01
6.	Raster Data Processing Using Python	01
7.	Vector Data Processing Using Python	01
8.	Artificial Intelligence (AI), Machine Learning (ML) & Deep Learning (DL) Libraries and APIs in Python	01

3.   Organised by:

Indian Institute of Remote Sensing (IIRS), ISRO Dehradun, India

4.   Mode:
- Live & Interactive and also as
- Massive Open Online Course (MOOC) through E-CLASS LMS

5.   Medium: English

6.   Time Of Course- 17-July-2023 to 28-Jul-2023

7.   Registration Link

https://www.iirs.gv.in/webinar

(Registrations will open in the Month of June 2023)

8.   Contact Persons:
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