

Gis Vision India®

# 1 Month Python with GIS Development Training Course.

Training Module GVI®

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Bharat

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## 1. Introduction to Python for GIS

- Overview of Python and its relevance in GIS
- Installing Python and essential libraries

## 2. Basics of Python

- Python syntax, variables, and data types
- Control structures (if statements, loops)

## 3. Python Functions and Modules

- Defining functions in Python
- Importing and using Python modules

## 4. Working with Data in Python

- Data input and output in Python
- Basic data manipulation with Pandas

## 5. Introduction to GIS

- Understanding GIS concepts and applications
- Overview of GIS software and data formats

## 6. Geospatial Data Handling

- Geospatial Data Formats
- Introduction to geospatial data formats (shapefiles, GeoJSON, etc.)
- Reading and writing geospatial data with Python

## 7. Geospatial Data Visualization

- Creating basic maps and plots with Python
- Introduction to Matplotlib and other visualization libraries
- Spatial Data Analysis with Python
- Geospatial analysis techniques (buffering, spatial joins, etc.)
- Using GeoPandas for spatial data analysis

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- Reprojecting and transforming geospatial data

## 9. Mapping with Python

- Introduction to map making
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## 10. Geocoding and Location-Based Services

- Geocoding addresses and locations
- Integrating location-based services into Python apps

## 11. Remote Sensing Data Analysis

- Introduction to remote sensing data
- Analyzing and processing remote sensing data with Python

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