

GIS Application in Agriculture.

Duration: 1 Month

Specialization: Agriculture

Training Moule GVI®

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Please be aware that the field of geographic information systems (GIS) is dynamic, and technology and best practices may evolve over time. It is advisable to stay current with the latest developments in GIS through ongoing education and professional development.

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1. Introduction to Geographic Information Systems (GIS)

- What is GIS?
- Components of GIS
- Definition of GIS and its significance in various fields.
- Historical development and evolution of GIS technology.
- GIS Components
- Software: Overview of popular GIS software's
- Data types
- Geographic coordinate systems and projections.
- Data models: Vector and raster data structures.

2. Data Acquisition

- Data sources: Maps, GPS, remote sensing.
- Data collection methods: Surveys, digitization, scanning.

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- Land use and land cover mapping.
- Agriculture and crop monitoring.
- Environmental monitoring and change detection.

Applications:

1. Introduction to GIS and Its Applications in Agriculture

- Overview of GIS and its relevance in agriculture
- Key applications of GIS in agricultural processes

2. GIS Data Types in Agriculture

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- Attribute data and databases relevant to agriculture

3. Understanding Agricultural Systems

- Overview of agricultural systems and practices
- Identifying GIS applications in different agricultural domains (crops, livestock, forestry)

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- Field data collection using GPS and mobile devices
- Secondary data collection from different sources

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- Variable rate technology and yield mapping

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- Using GIS for crop health assessment and monitoring
- Disease and pest management with GIS

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- Using GIS for watershed delineation and hydrological analysis
- Irrigation planning and optimization with GIS

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Exploring emerging technologies and trends in GIS and agriculture

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