Analysis and Geoprocessing with ArcGIS Pro

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Overview

- Spatial Analysis in ArcGIS
- Types of Spatial Analysis
- Geoprocessing
- Demo
- Performing Analysis in ArcGIS Pro
- Spatial Analysis Workflow
- Automating Analysis
- Demo
- Resources
ArcGIS Is a Platform
Enabling Web GIS Everywhere

Simple
Integrated
Open

Desktop Web Device

Portal

Server Online Content and Services

Web GIS

Available in the Cloud . . . . . . and On-Premises
Spatial Analysis in ArcGIS

- Transforms raw geographic or spatial data into new information
- Answers the ‘WHERE’ question
Types of Spatial Analysis

- Proximity: What is nearby?
- Overlay: What is inside of or on top of what?
- Statistical: What do geographic patterns tell us?
- Temporal: What changes have occurred over time?
Geoprocessing

• A rich suite of tools for processing geographic data (ArcGIS Pro = ~ 800 geoprocessing tools)

• Combines both Spatial analysis and GIS data management tools

• Framework you can use to model and automate processes using ModelBuilder or python
DEMO

Geoprocessing in ArcGIS Pro

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Performing Analysis in ArcGIS Pro

• Incredible analysis capabilities in 2D, 3D and 4D

• Both vector and raster data.

• Scalable 64-bit execution, multi-threaded processing.

• Extensions available:
  • Spatial Analyst
  • Network Analyst
  • 3D Analyst
  • Geostatistical Analyst
Spatial Analysis Workflow

1. Frame the question
2. Choose and prepare data
3. Choose method and tools
4. Perform the analysis
5. Examine and refine the results
6. Share the results
Automating Analysis

- **ModelBuilder** – automating, visualizing, documenting and sharing geoprocessing workflows, performing iterations, creating custom geoprocessing tools.
- **Python Window** – automating geoprocessing workflows, leveraging program logic, accessing third-party libraries, creating custom script tools.
- **ArcGIS Pro Tasks** – set of pre-configured steps that guide a user through a workflow. Can include geoprocessing as well as manual operations like selections and editing.
Creating and using ArcGIS Pro Tasks

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Resources

ArcGIS Pro Analytics

What is Geoprocessing?

Analysis & Geoprocessing in ArcGIS Pro: Frequently asked questions
- https://blogs.esri.com/esri/arcgis/2015/02/06/analysis-geoprocessing-in-arcgis-pro-frequently-asked-questions/