Writing Advanced Geoprocessing Scripts Using Python

3 days (24 hours) Authored by ESRI

Overview

Building on the skills and knowledge taught in *Introduction to Geoprocessing Scripts Using Python*, this course teaches intermediate to advanced Python scripting techniques for the ArcGIS geoprocessing framework. You begin by refining your Python scripting skills as you manipulate several key data types and create effective, reusable code. You then apply these skills to execute custom geoprocessing functionality. The course covers how to incorporate Python scripts into the ModelBuilder environment and prepares you to leverage the full capabilities of Python scripting within the ArcGIS geoprocessing framework.

Who Should Attend

This course is designed for experienced ArcGIS users who want to create Python scripts to automate complex geoprocessing tasks.

Goals

Those completing this course will be able to:

Manipulate Python's key data types, including strings, lists, and dictionaries.
Write Python scripts to read and write text files.
Create reusable code.
Create scripts that read existing geometries and create new geometries.
Work with subsets of data.
Implement data management techniques on personal, file, and multiuser geodatabases.
Incorporate Python scripts into the ModelBuilder environment.
Call the Geoprocessor from VBA

Topics Covered

Table of Contents [PDF 46kb]

Working with Python data types: Strings; Lists; Dictionaries.
Python modules and functions: Importing built-in Python modules; Getting help for functions; Manipulating strings; Creating a random selection; Controlling script termination.
Working with geometry: Cursor objects; Point objects; Geometry object properties.
Working with subsets of data: Feature classes vs. feature layers; Tables vs. table views; Creating a subset of fields and records.
Managing data: SpatialReference and ValueTable objects.
Making code reusable: Building and sharing custom tools and toolboxes.
Working with ModelBuilder: Iterating through models; Incorporating Python scripts into models.
Calling the geoprocessor with VBA.

Prerequisites

Students should have completed ArcGIS Desktop II: Tools and Functionality or Learning ArcGIS Desktop, ArcGIS Desktop III: GIS Workflows and Analysis, and Introduction to Geoprocessing Scripts Using Python or have equivalent knowledge. Students should have experience applying the concepts and syntax taught in the introductory course. In particular, experience writing Python scripts that contain variables, loops, and standard ArcGIS geoprocessing tools is required.

Course Registration

$1,470.00 USD (per student)

Class Schedule

ESRI will teach this course at your facility. Find out more about client-site classes.

How To Register

Instructor-led Training
Payment Options
Pricing

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