

Training the GIS Professional

Imagery Analysis in ArcGIS Pro - 2 days

Overview

Transform pixels into information.

Workflows and considerations to display, process, and create derived raster products using ArcGIS Pro, Image Analyst and Spatial Analyst extensions are covered. You will explore common imagery applications, including disaster recovery, damage assessment, and forest canopy assessment.

Who should attend

GIS professionals and imagery analysts in the private sector and civilian government agencies who need to extract meaningful information from satellite imagery, unmanned aerial vehicle (UAV)-collected data, and other imagery formats.

Goals

- Apply dynamic raster functions to enhance imagery display and perform change detection.
- Perform image classification and assess the accuracy of results.
- Post-process classified thematic rasters to support analysis needs.
- Work with derived information products including digital elevation models.

Topics Covered

- Rasters. What is remote sensing? Rasters in ArcGIS Pro Sensor resolutions; The electromagnetic spectrum; Band combinations.
- Raster functions. What are raster functions? Accessing raster functions; Benefits of raster functions; Consider raster function parameters; Types of raster functions.
- Raster function templates: What are raster function templates? Raster function template components; Evaluate a raster function template; Benefits of using raster function templates.
- Change detection with raster functions. Change detection types; Choosing types of change detection; Pixel value change detection workflow; Preprocessing methods for change detection; Discovering change with the Change Detection wizard; Identifying meaningful change.
- Image classification techniques. Defining image classification; Describing image classification outputs; Image classification types; Image classification methods; Choosing image classification techniques.

Topics Covered Continued

- Classification workflows: Classifying a raster with the Image Classification wizard; Unsupervised image classification workflow; Tools to perform an Unsupervised Classification; Supervised image classification workflow.
- Image Segmentation: What is segmentation? Segmentation parameters; Segmentation parameter exploration.
- Train the classifier: What is a Training Sample? The Training Sample Manager; Training sample considerations; Types of image classification algorithms.
- Classification evaluation: Pixel editor functionality, Post-processing classification results; Accuracy assessment workflow; Accuracy assessment statistics: deciphering a Confusion Matrix.

Prerequisites

Completion of ArcGIS Pro 2 – Essential Workflows for ArcGIS Pro or Migrating from ArcMap to ArcGIS Pro or equivalent knowledge.

Contact Us

For GIS training enquiries and bookings visit esriuk.com/learning, email us at learning@esriuk.com or call us on 01296 745504