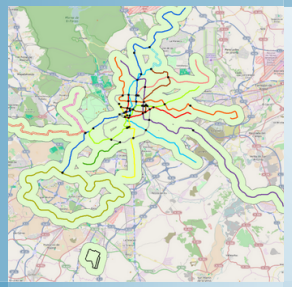
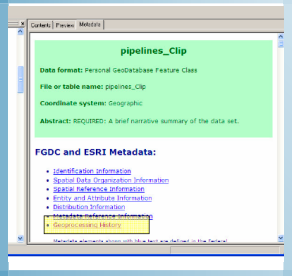
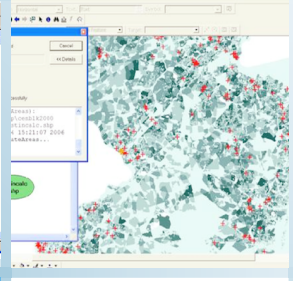
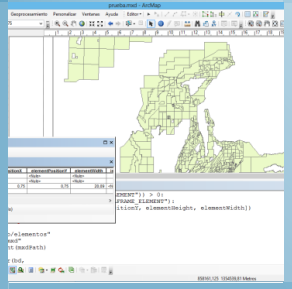
USING PYTHON WITH ARCGIS ADVANCED LEVEL

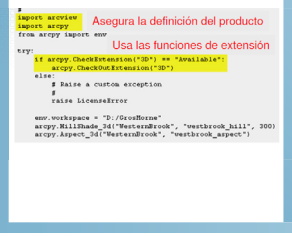
ONLINE TRAINING

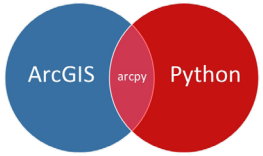


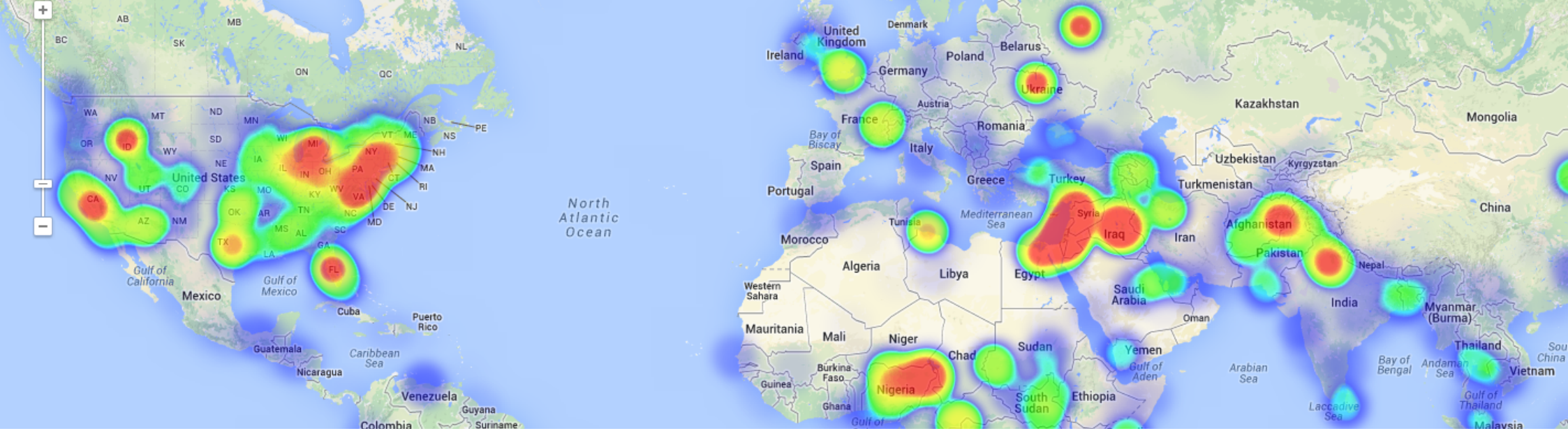












COURSE

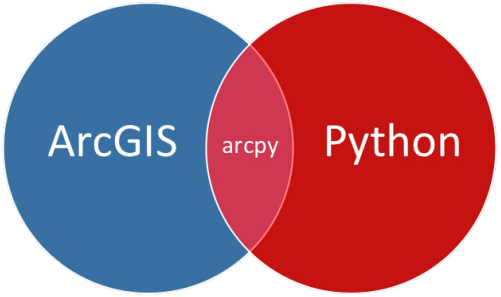
The course will train students in the advanced use of Python programming language along with ArcGIS Desktop collection software on: process and tasks automation, vector and raster analysis, map generation and publication, geoprocessing model creation, etc.

The student will be trained in the advanced use of Python programming language, will learn how to create Add-ins or how to build custom UI tools for ArcGIS (ArcMap). Advanced vector and raster analysis using Python will also be included in the training process.

GOALS

- Learn how to build custom UI (user interfaces) for ArcMap using Python Add-ins.
- Familiarize with the ArcPy objects and libraries in order to perform complex spatial analysis.
- Gain knowledge about spatial data management using integrated ArcPy libraries.

ESRI ArcGIS



METHOLOGY

Enrolled students in this online course will have access to our virtual e-learning platform (which is available 24 hours), where they will find the content of the course, practical exercises, forum discussion and additional content. One of the advantages of this online platform, is that students can benefit of real time support and assistance offered by the instructor (2 hours per week), whom they can contact via direct messages, regarding course related issues, at any moment. They can also contact the instructor via email.

PERFILES

The course is aimed at professionals of the GIS world who, with knowledge or not of programming, want to know all the possibilities that programming with ArcPy offers.

INSTRUCTORS

Chencho Martín Lagunas

GIS Developer with extensive experience in Full-Stack software development, specialized in GIS data analysis and pre-processing using Python.

Alberto Santos Estévez

Consultant and Geospatial Developer with more than 15 years' experience in GIS integrated solutions and high performance systems.

PROGRAM

THE DATA ACCESS MODULE, ARCPY.DA

What is the data access module?
Accessing data using cursors
Edit sessions
Work with versions, domains and subtypes

CREATING CUSTOM TOOLS FOR ARCGIS WITH PYTHON SCRIPTING

First steps to create a Python script tool
Progress messages
Write messages in script tools
Understanding Progressor in script tools
Progressor functions and capabilities

DEVELOP ADD-INS FOR ARCGIS DESKTOP WITH PYTHON

Introduction to Add-In
Creating a Python Add-In tool
Share and install Add-Ins
Editing Add-Ins
Python Miscellaneous Topics

CREATE GRAPHICS WITH ARCPY

Introduction.
Graph
Graph proprieties
Graph methods
Make Graph
GraphTemplate
Exporting a graph to a native format
Save Graph

CONVERT GEOJSON OBJECTS TO GEOMETRY

What is the GeoJSON format?
GeoJSON code example
Converting geometries between GeoJSON and ArcPy objects

ADVANCED TOOLS

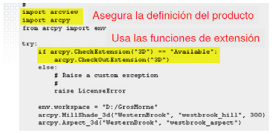
Introduction
FieldMappings processes
Proprieties and methods of FieldMappings object
The FieldMappings object
Working with multivalue inputs
Working with feature sets and record sets
Create and use RecordSet/FeatureSet objects
Create RecordSet/FeatureSet from input tools
How to get results from a geoprocessing server tool

USING CUSTOM TOOLBOXES

Importance of custom geoprocessing tools
Use a custom geoprocessing tool
ArcGIS Server toolboxes
Geoprocessing tasks with Python scripts

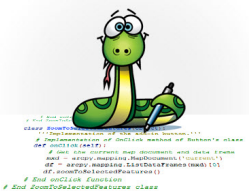
MANAGE ARCSDE GEODATABASES WITH PYTHON

Introduction
Validate table names
Validate field names
How to parse table and field names
Using SQL with ArcSDE
Transactions with ArcSDESQLExecute
Workflow Transactions
Introduction to raster analysis with spatial analyst module of ArcPy



INTRODUCTION TO SPATIAL ANALYST MODULE OF ARCPY

Raster - ArcPy Classes
Working with Raster Objects - overview of Map Algebra
Raster Dataset properties
Raster Methods
An overview of Spatial Analyst classes
An overview of neighborhood classes



TYC GIS Training

GIS Course .com

(+34) 910 325 482

training@tycgis.com

Calle Fuencarral 158,
Entreplanta, Oficina 16-17
28010 Madrid

TYC GIS MÁLAGA
Avda. Pintor Joaquin Sorolla 137, 1° D
29017 MÁLAGA

TYC GIS MÉXICO
Tequesquitengo 4, Fracc. Cuaunáhuac
C.P. 62450,
Cuernavaca, Morelos.

TYC GIS PANAMÁ
Calle Eusebio A. Morales
El Cangrejo
PH Neo Plaza Oficina 2015