Introduction to Scripting your WebGIS with ArcGIS API for Python

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ArcGIS Python API

• What is it?

  • Python API to your Web GIS
  • Powerful, modern and easy to use
  • Implemented using REST
ArcGIS Python API
• What can it do for you?

Your Web GIS

Script and automate your Web GIS

Data Scientists
Analysts
Imagery
Power Users
Developers

Platform API

Power Users Developers

Administrators
DevOps

Enterprise Integration
Users, Roles & Group management

Your Web GIS

Content Publishers

Spatial Analysis
Imagery
Location Analytics

Big Data

Raster Analytics

Feature Analytics

Data Scientists

Your Web GIS
Quickstart
What can it do for you?

Automate WebGIS management
- Populate portal with users, groups
- Clone portals
- Reassign user content
- Perform comprehensive content search
- Determine item relationship
- Create reports of users, their items

Automate content creation
- Automate content publishing during off peak hours
- Update tiles and features from a known database
- Replicate development environment content to production
- Inspect and update items with broken service links

Reproducible research
- Access big data tools programmatically
- Utilize rich 3rd party Python packages for data analysis
- Create rich charts, graphs, embed 2D and 3D maps in Jupyter Notebook environment
- Share your research with data and notes with peers
Demo

Automating administrative workflows with Python API
Demo

Automating content creation with Python API
Demo

Big data analysis with Python API
How do you get this?

- **Distributed via Conda**
  - Simplifies installs & updates
  - Installs dependencies
  - Avoids conflicts

- **Install steps:**
  - Download Anaconda
  - `conda install -c esri arcgis`
How do you get this?

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Install steps:
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Have ArcGIS Pro?

- ArcGIS Pro includes conda
- Follow steps from install guide to install arcgis package...
Resources

developers.arcgis.com/python
Resources

Notebooks.esri.com

hub.docker.com/r/esridocker
Incremental Software Release

- v0.3 (Mid 2016)
- v1.0 (10.5)
- v1.1 (2016)
- 10.5.1 (Mid 2017)
- v1.2 (2017)

Continuous Online Improvements

Big Data
- Scientific Modeling
- GeoAnalytics
- Raster Analysis
- Server GIS
- Realtime GIS
- Live samples

3D
- Notebooks as items
- Spatial dataframes
- micro services
- SDK Docker image
- Workflow integrations
- machine learning

Road Map
Questions?