ArcGIS Python API:
Introduction to Scripting your Web GIS

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ArcGIS API for Python

- What is it?
  - Pythonic representation of your GIS
  - Powerful, modern and easy to use
  - Implemented using REST + local capabilities
ArcGIS API for Python

Who is it for?

- Power Users
- Developers
- Administrators
- DevOps
- Analysts
- Imagery
- Spatial Analysis
- Big Data
- Raster Analytics
- Feature Analytics
- Data Scientists
- Location Analytics
- Content Publishers

Script and automate your Web GIS
Demo
Quick start
Demo

Automating administrative workflows with Python API
Demo

Automating content creation with Python API
Demo
Analysis with Python API
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

What can it do for you?

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

What can it do for you?
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?

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

Install steps:
- Download Anaconda
- `conda install --c cesri arcgis`
Have ArcGIS Pro?

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

developers.arcgis.com/python

github.com/Esri/arcgis-python-api

Script and automate your Web GIS

The ArcGIS API for Python lets ArcGIS Online and ArcGIS Enterprise users, analysts, developers and administrators script and automate tasks ranging from performing big data analysis to content management and administration of their web GIS. The API integrates well with the Jupyter Notebook and the SciPy stack and enables academics, data scientists, and GIS analysts to share programs and reproducible research with others.
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<thead>
<tr>
<th>Title</th>
<th>Date &amp; time</th>
<th>Room</th>
<th>Repeat Date &amp; time</th>
<th>Repeat Room</th>
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<tr>
<td>Administering ArcGIS Enterprise and ArcGIS Online with Python</td>
<td>Tuesday (July 11) 8:30 – 9:45 AM</td>
<td>SDCC – Ballroom 06 D</td>
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<td>Mapping, Visualization and Analysis using ArcGIS API for Python</td>
<td>Tuesday (July 11) 8:30 – 9:45</td>
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<td>SDCC – Room 09</td>
<td>Wed (July 12) 10:15 – 11:30</td>
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<td>Cloning your Portal users, groups and content using ArcGIS API for Python</td>
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<td>SDCC – Demo Theater 11</td>
<td>Wed (July 12) 2:30 – 3:15 pm</td>
<td>SDCC – Demo Theater 11</td>
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