



Introduction to the ArcGIS API for Python

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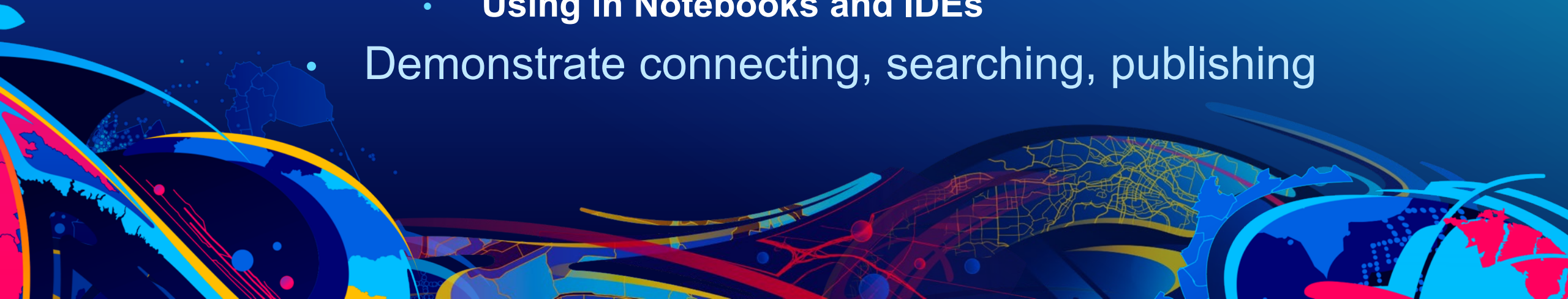
Target Audience

- Experience with
 - organizations deployed to ArcGIS Online and/or ArcGIS Enterprise
 - Python
- Interested in learning what the API for Python can do



Agenda – Part I

- Define the ArcGIS API for Python
 - **what it is**
 - **who it is for**
 - **description of modules**
- Access the ArcGIS API for Python
 - **ArcGIS Pro community**
 - **Anaconda Distribution community**
 - **Using in Notebooks and IDEs**
- Demonstrate connecting, searching, publishing



ArcGIS API for Python

- What is it?
- Python library for spatial analysis, mapping and GIS
- Powerful, modern and easy to use
- Powered by Web GIS, with local capabilities

Made for AUTOMATION and DATA SCIENCE



ArcGIS API for Python and ArcPy

ArcGIS API for Python

- Script against an organization:
 - Online or Enterprise
- Use with services:
 - Analysis, Portal Admin, Content Creation, Big Data Analysis

ArcPy

- ArcGIS Desktop
 - ArcMap – Python 2.x
 - ArcGIS Pro – 3.x
- Local data
 - Mostly geoprocessing
 - Map automation

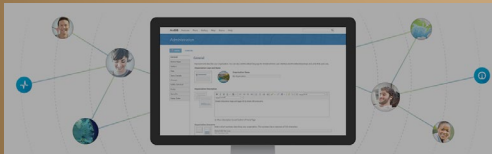
ArcGIS API for Python

What can it do for you?

Platform API
**Power Users
Developers**

Integration

Users, Roles & Group management



**Administrators
DevOps**

Analysts

Spatial Analysis

Imagery

Location Analytics

Big Data

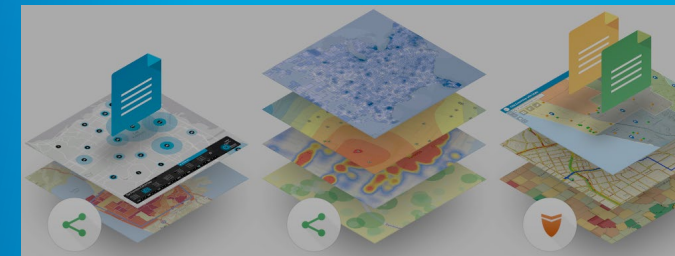
Raster Analytics

Feature Analytics

Data Scientists

Your Web GIS

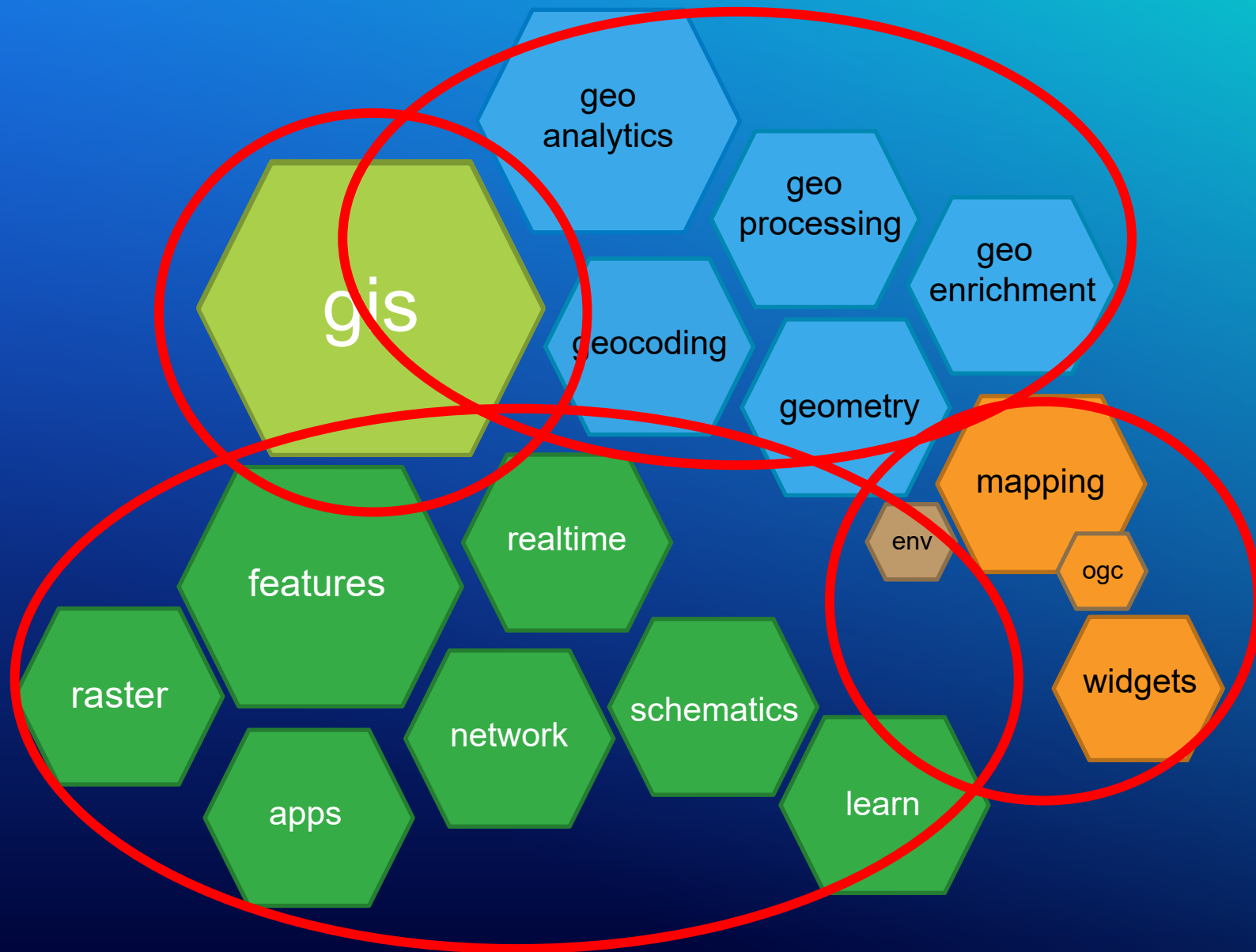
Content Publishers



Data Management

A Pythonic representation of GIS

API Overview



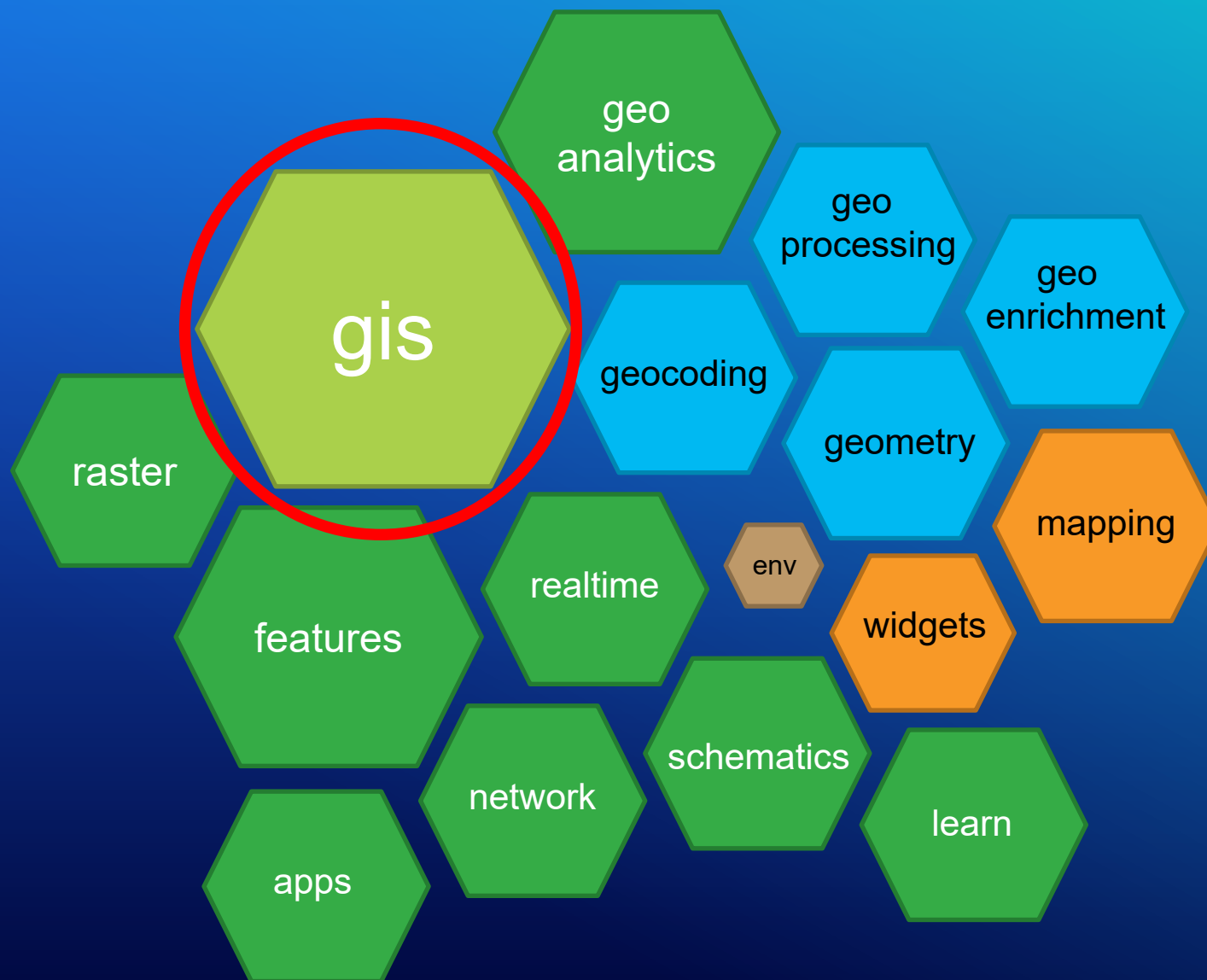
Getting the API

Multiple avenues to experience the API

- **Install and set up Guide:** <https://developers.arcgis.com/python/guide/install-and-set-up/>

Focus: Distribution as a *conda* package named *arcgis*

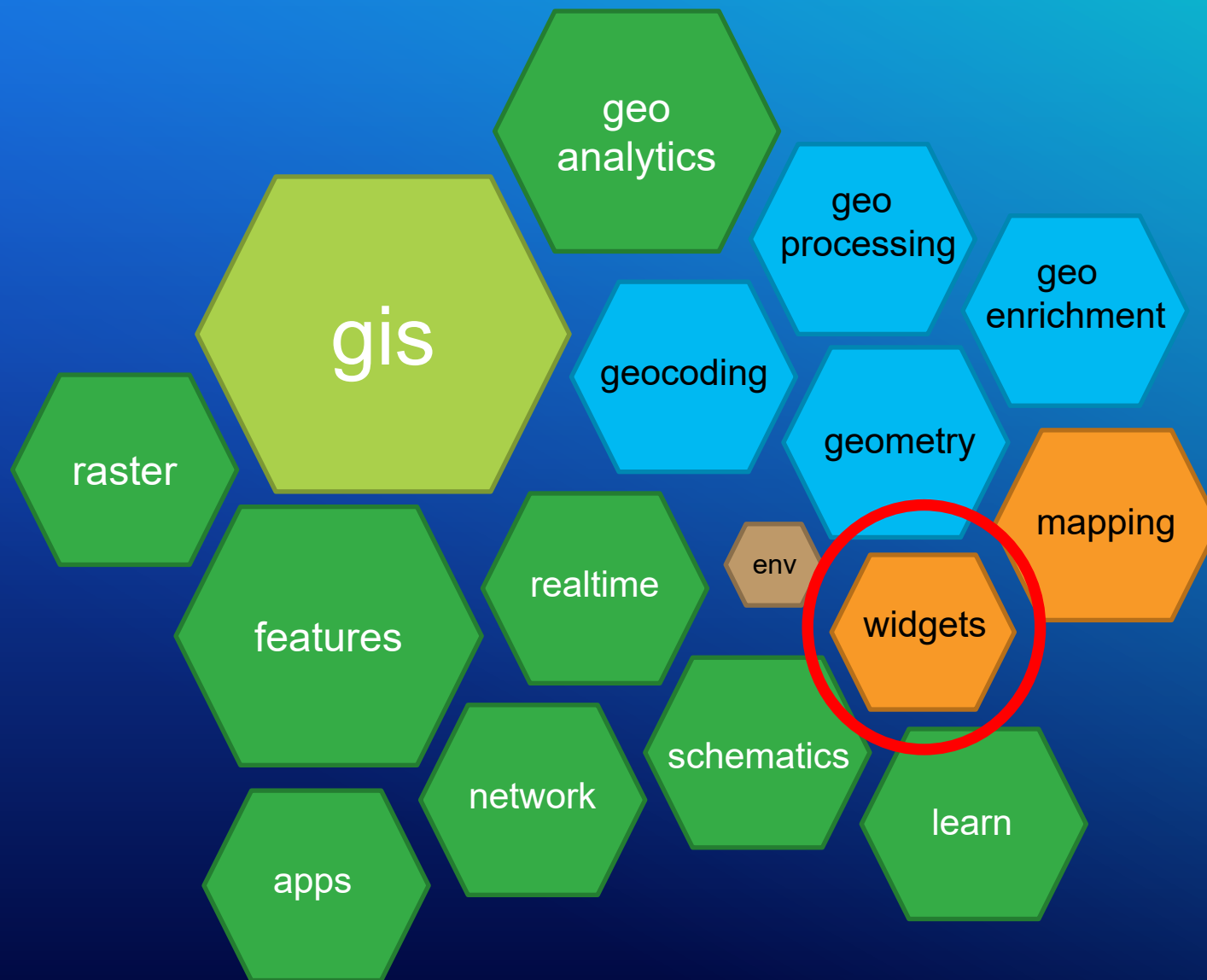
- ArcGIS Pro community
- Python Geospatial and scientific community



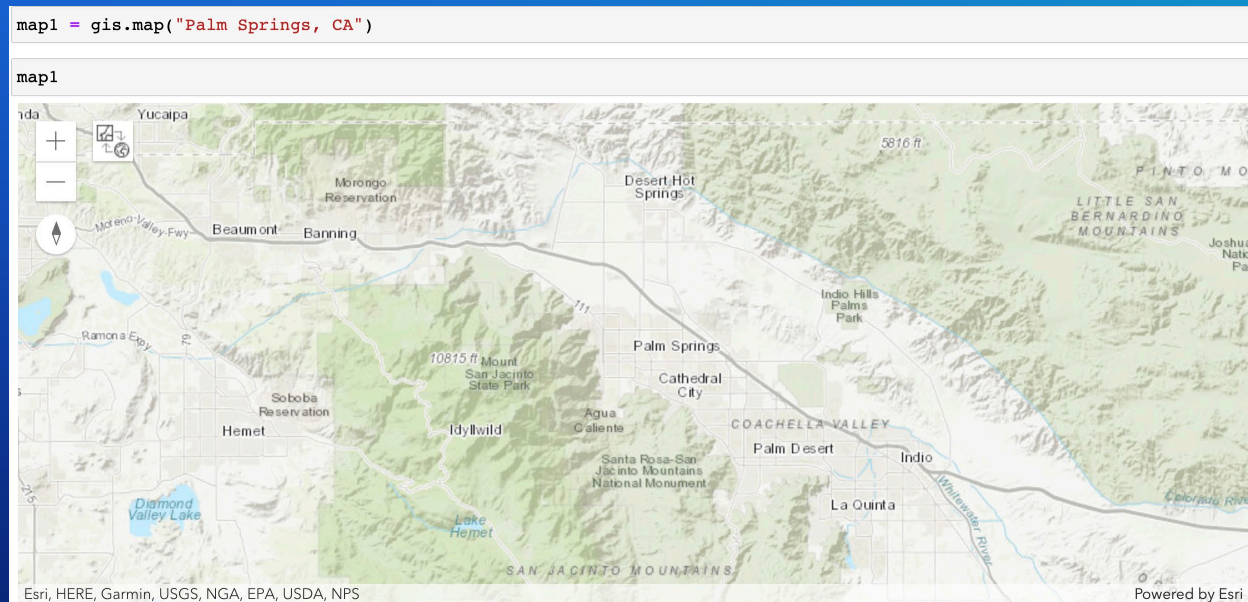
Using the GIS

- The GIS class provides access to the organization: system, users, content
- Supports multiple logins methods
- Leverages ArcGIS Pro Authentication
 - Used for security
- Support profiles
 - Credentials do not get stored in scripts!

```
▶ In [1]: from arcgis.gis import GIS
```



The Map Widget



- visualization within Notebooks

Demo:

Accessing and Using the API



ArcGIS Pro and Anaconda

- Notebooks
- IDE

Agenda – Part 2

- Review of the different modules of the API
- Example use cases for the different modules of the API
 - **Data engineering using ArcGIS Pro Notebooks**
 - **Site selection analysis using ArcGIS Online Notebooks**
- Documentation website and resources for further learning



API Overview

