ArcGIS API for Python 20-001

General information

The ArcGIS API for Python Specialty exam tests the candidate's ability to use ArcGIS API for Python to automate content management tasks, as well as, to use the API to complete analysis and data science workflows. The ArcGIS API for Python Specialty exam is designed for candidates who have earned a Core certification and have at least one year of ArcGIS API for Python knowledge including experience with web GIS (querying content, organization management, publishing content, spatial analysis, etc.), python fundamentals (working with Python's built-in capabilities, writing functions, flow control, data types etc.), and familiarity with an IDE (such as Jupyter Notebook, IDLE, ArcGIS Pro Python Console).

👉 Exam Duration: 60 minutes

👉 Number of questions: 40 MCQs

👉 Exam Guide: LINK

Study Plan

The following study plans are available from ESRI Training platform https://www.esri.com/training. You can focus on the web courses and videos, also the Instructor Led courses might be beneficial if you have more time and you have access to them.

ESRI Learning Plan for ArcGIS API for Python Exam	• Resources in this plan will help you refresh your skills in concepts related to the exam • Link
ArcGIS API for Python Fundamentals	• Learn to perform GIS visualization, analysis, data management, and administration using ArcGIS API for Python • Link

Exam Topics vs. Sample Code

ESRI provides heaps of code samples on GitHub and on the API reference home page, which cover different workflows demonstrating the API capabilities. The following table lists the exam topics which are highlighted in the exam guide, and map each of them with the relevant code samples

• Symbology/ Visualization • Access feature attributes • Recognize and interpret JSON	• https://developers.arcgis.com/python/guide/smart-mapping/ • https://developers.arcgis.com/python/guide/advanced-cartography-part1/ • https://developers.arcgis.com/python/guide/advanced-cartography-part2/ • https://developers.arcgis.com/python/guide/working-with-feature-layers-and-features/ • https://www.esri.com/training/catalog/5eb1876d59bcad254d30a2ab/arcgis-api-for-python%3A-mapping%2C-visualization%2C-and-exploratory-data-analysis/ • https://community.esri.com/t5/arcgis-api-for-python-blog/methods-for-updating-layer-symbology-with-the-arcgis-api-for/ba-p/902923
• Query content and layers	• https://developers.arcgis.com/python/guide/accessing-and-creating-content/ • https://support.esri.com/en/Technical-Article/000024383
• Display webmaps • Add content to webmaps and web-scenes • Build webmaps	• https://developers.arcgis.com/python/guide/working-with-web-maps-and-web-scenes/ • https://developers.arcgis.com/python/sample-notebooks/publishing-web-maps-and-web-scenes/

Publish and overwrite	• https://developers.arcgis.com/python/sample-notebooks/publishing-packages-as-web-layers/ • https://developers.arcgis.com/python/sample-notebooks/publishing-sd-shapefiles-and-csv/ • https://github.com/Esri/arcgis-python-api/tree/master/samples/05_content_publishers
Analyze patterns	• https://developers.arcgis.com/python/guide/analyzing-patterns-in-feature-data/ • https://github.com/Esri/arcgis-python-api/blob/master/samples/04_gis_analysts_data_scientists/analyze_patterns_in_construction_permits_part1.ipynb • https://github.com/Esri/arcgis-python-api/blob/master/samples/04_gis_analysts_data_scientists/analyze_patterns_in_construction_permits_part2.ipynb
Edit features and records	• https://developers.arcgis.com/python/sample-notebooks/updating-features-in-a-feature-layer/ • https://developers.arcgis.com/python/guide/editing-features/ • https://developers.arcgis.com/python/guide/appending-features/
Manage content	• https://developers.arcgis.com/python/guide/accessing-and-creating-content/ • https://developers.arcgis.com/python/guide/managing-your-content/ • https://developers.arcgis.com/python/sample-notebooks/using-and-updating-gis-content/
Clone content	• https://developers.arcgis.com/python/sample-notebooks/clone-portal-users-groups-and-content/ • https://developers.arcgis.com/python/sample-notebooks/clone-a-group/ • https://developers.arcgis.com/python/guide/cloning-content/ • https://support.esri.com/en/technical-article/000022252
Create views	• https://support.esri.com/en/technical-article/000020083 • https://community.esri.com/t5/arcgis-api-for-python-blog/using-the-arcgis-api-for-python-to-create-a-view-from-a-hosted/ba-p/902966
Perform spatial analysis	• https://developers.arcgis.com/python/sample-notebooks/fighting-california-forest-fires-using-spatial-analysis/ • https://github.com/Esri/arcgis-python-api/blob/master/samples/04_gis_analysts_data_scientists/fighting_california_forest_fires_using_spatial_analysis.ipynb
Use Jupyter Notebook environment	• https://developers.arcgis.com/python/guide/using-the-jupyter-notebook-environment/ • https://www.esri.com/training/catalog/5c7091bd65e21d6e2182f252/get-started-with-arcgis-notebooks/ • https://developers.arcgis.com/python/sample-notebooks/building-a-change-detection-app-using-jupyter-dashboard/ • ArcGIS Python API in Jupyter Notebooks | burdGIS
Use Pandas	• https://developers.arcgis.com/python/sample-notebooks/html-table-to-pandas-data-frame-to-portal-item/ • https://www.esri.com/training/catalog/5ea8a5c359bcad254d2eb63b/arcgis-api-for-python%3A-getting-to-know-pandas-and-the-spatial-enabled-dataframe/