

## Exercise 1

### Introducing Python

#### Exercise data

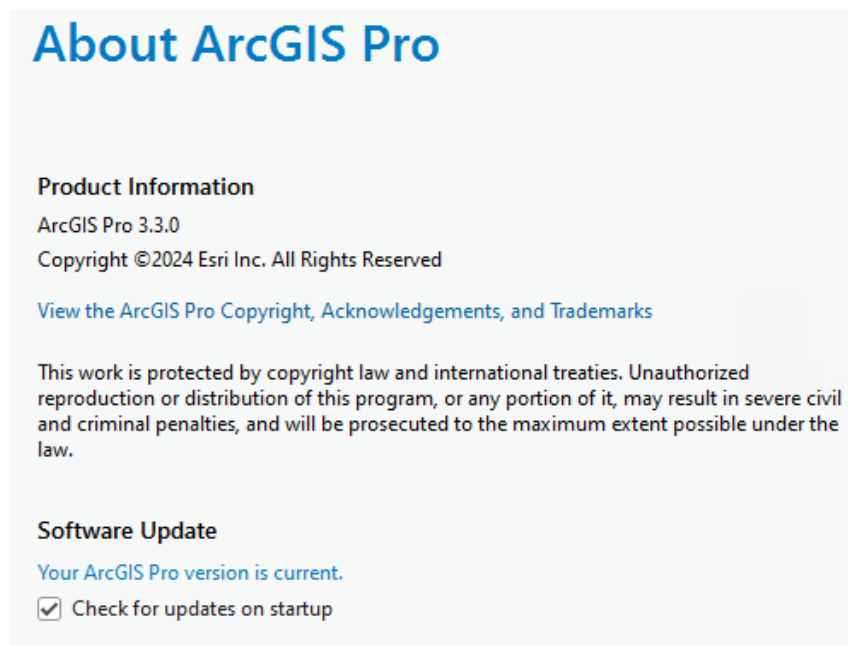
Exercise 1 does not require any data to be downloaded.

#### Check software versions and licensing

You will determine the version of the ArcGIS Pro software installed on your computer and confirm the licensing.

1. **Start ArcGIS® Pro. You can open any of your existing projects or start with a blank template—for these steps, it makes no difference.**
2. **On the Project tab, click About.**

This brings up the product information and looks like the figure below.

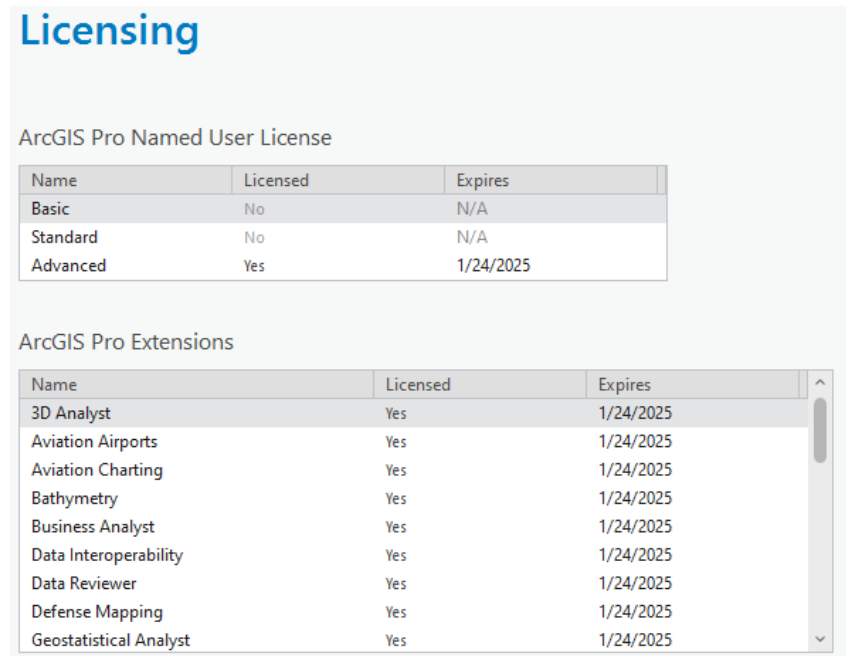


Take note of the version of ArcGIS Pro. The code in the Python Scripting for ArcGIS Pro book is developed and tested for ArcGIS Pro 3.2 and the accompanying exercises are tested for ArcGIS Pro 3.3. Most of the code will work for earlier versions of ArcGIS Pro 3.3, but some functionality may be slightly different, and you are encouraged to upgrade to ArcGIS Pro 3.3 if you have not done so already. All code is expected to work in later versions of the software in the future. Much of the code will not work in any version of ArcGIS Desktop 10.x.

Next, you will look at licensing.

### 3. On the Project tab, click Licensing.

This brings up the licensing information and looks like the figure below.



The screenshot shows the 'Licensing' window in ArcGIS Pro. It has a title bar 'Licensing' in blue. Below it, the section 'ArcGIS Pro Named User License' contains a table with three columns: 'Name', 'Licensed', and 'Expires'. The table lists three license types: 'Basic' (Not licensed, expires N/A), 'Standard' (Not licensed, expires N/A), and 'Advanced' (Licensed, expires 1/24/2025). Below this, the section 'ArcGIS Pro Extensions' contains another table with the same three columns. This table lists ten extensions, all of which are licensed and expire on 1/24/2025. A vertical scrollbar is visible on the right side of the extensions table.

Name	Licensed	Expires
Basic	No	N/A
Standard	No	N/A
Advanced	Yes	1/24/2025

Name	Licensed	Expires
3D Analyst	Yes	1/24/2025
Aviation Airports	Yes	1/24/2025
Aviation Charting	Yes	1/24/2025
Bathymetry	Yes	1/24/2025
Business Analyst	Yes	1/24/2025
Data Interoperability	Yes	1/24/2025
Data Reviewer	Yes	1/24/2025
Defense Mapping	Yes	1/24/2025
Geostatistical Analyst	Yes	1/24/2025

Take note of the type of licensing (e.g., Named User License), the product (e.g., Advanced), and the available extensions (e.g., 3D Analyst, Spatial Analyst, and others). The type of licensing and the product are not critical because the code in *Python Scripting for ArcGIS Pro* and the accompanying exercises work for any type or product. However, the code in exercise 8 works only if you have a license for Spatial Analyst. If you do not have a license for Spatial Analyst, you should contact your license administrator.

Next, you will check the Python environment.

### 4. On the Project tab, click Package Manager.

This brings up the Package Manager and looks like the figure below.

# Package Manager

Manage environments and packages for Python, R, and system libraries.

⚠ Cannot modify the default Python environment (arcgispro-py3). Clone then activate a new environment first. [Learn more about cloning environments](#) ×

📦 Installed (261) 🔄 Updates ➕ Add Packages (9886) Active Environment arcgispro-py3 ⚙

The packages installed in the active environment.

🔍

anyio

High level asynchronous concurrency and networking framework

4.2.0

appdirs

A small Python module for determining appropriate platform-specific dirs

1.4.4

arcgis ⓘ ⓘ

ArcGIS API for Python

2.3.0

arcpy ⓘ ⓘ

The Esri ArcPy Python library

3.3

arcpy-base ⓘ ⓘ

The Esri ArcPy Python library, minimum dependencies

3.3

argon2-cffi ⓘ

The secure Argon2 password hashing algorithm

21.3.0

argon2-cffi-bindings

Low-level Python CFFI Bindings for Argon2

21.2.0

arrow-cpp

C++ libraries for Apache Arrow

15.0.0

asttokens

2.0.5

arcgis

ArcGIS API for Python

Installed: 2.3.0

License: Esri Master License Agreement (MLA)

Homepage: <https://developers.arcgis.com/python>

Size: 7.04 MB

Description: Script and automate ArcGIS Online and ArcGIS Enterprise, completing tasks ranging from performing big data analysis to content management and administration. The API integrates directly with the Jupyter Notebook and the SciPy

Tasks

[Learn more about Conda packages](#)

By default, the active environment in ArcGIS Pro is arcgispro-py3. If you are using a different environment, you may need to switch back to the default to match exactly with the instructions in later exercises. Exercise 2 revisits how to manage environments.

End of exercise 1.