Instructions

Prerequisite: Python

If you haven't had Python on your laptop, please navigate to the Download Python page.

Download and run the installer for your particular system.

To verify that Python is installed successfully, open the Command Prompt and run the following command:

```
python --version
```

An example of the output of succeful installation:

```
Python 3.10.8
```

Install PyCharm

- PyCharm is a cross-platform IDE that provides consistent experience on the Windows, macOS, and Linux operating systems.
- PyCharm is available in two editions: Professional, and Community. The Community edition is free and open-sourced. For using the Professional edition, you can apply for free individual licenses for education.
- Download PyCharm here.

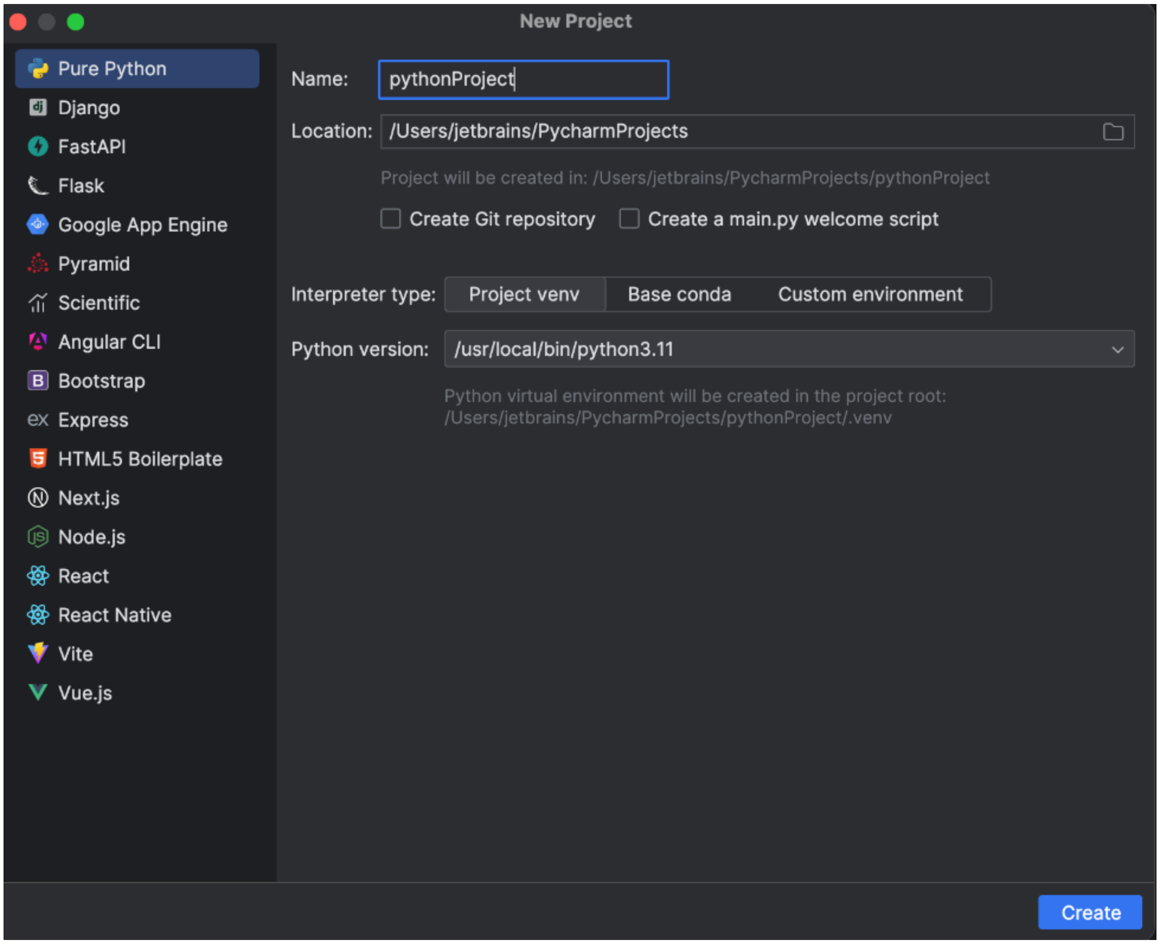
Start a project in PyCharm

To create a project, do one of the following:

- Go to **File** | **New Project**
- On the Welcome screen, click **New Project**

If you're using the latest version of PyCharm:

1. Create a **Pure Python** project. This template will create an empty project.
2. Choose the project location. Click the Browse icon on the right of the **Location** field and specify the directory for your project.
3. It's recommended to create a dedicated environment for each project. In most cases, the default **Project venv** will do the job, and you won't need to configure anything.



Name: pythonProject

Location: /Users/jetbrains/PycharmProjects

Project will be created in: /Users/jetbrains/PycharmProjects/pythonProject

□ Create Git repository □ Create a main.py welcome script

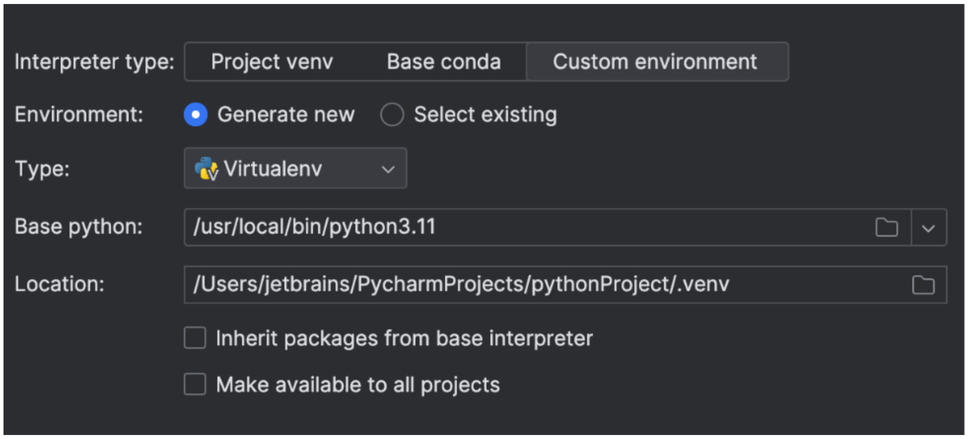
Interpreter type: Project venv | Base conda | Custom environment

Python version: /usr/local/bin/python3.11

Python virtual environment will be created in the project root:
/Users/jetbrains/PycharmProjects/pythonProject/.venv

4. Still, you can switch to **Custom environment** to create a new virtual environment or to use an existing environment. If you want to generate a new one, select Virtualenv for Type and specify the environment location.

5. Click **Create** when you are ready.



Interpreter type: Project venv | Base conda | Custom environment

Environment: ● Generate new ○ Select existing

Type: Virtualenv

Base python: /usr/local/bin/python3.11

Location: /Users/jetbrains/PycharmProjects/pythonProject/.venv

□ Inherit packages from base interpreter

□ Make available to all projects

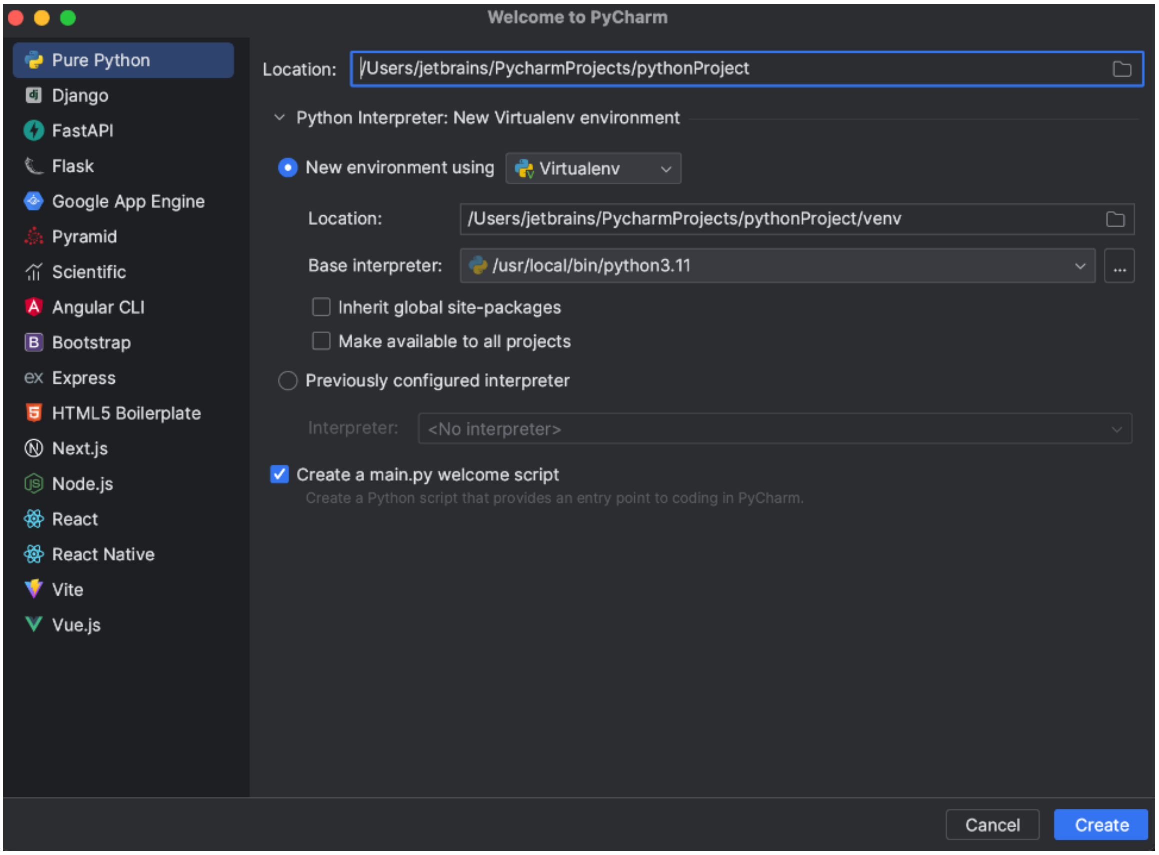
If you're using older versions of PyCharm:

1. Create a **Pure Python** project.
2. Choose the project location. Click the Browse icon on the right of the **Location** field and specify the directory for your project.
3. As stated, it is recommended to create a virtualenv for each project. In most cases, PyCharm create a new virtual environment automatically when you create a new project and you don't need to configure anything.

   Still, you can preview and modify the venv options. Expand the **Python Interpreter: New Virtualenv Environment** node and select a tool used to create a new virtual environment. Let's choose Virtualenv tool, and specify the location of the environment and the base Python interpreter used for the new virtual environment.

   If PyCharm detects no Python on your machine, it provides the following options:

   - Specify a path to the Python executable (in case of non-standard installation)
   - Download and install the latest Python versions from python.org
   - Install Python using the Command-Line Developer Tools (macOS only)



Location: /Users/jetbrains/PycharmProjects/pythonProject

Python Interpreter: New Virtualenv environment

● New environment using Virtualenv

Location: /Users/jetbrains/PycharmProjects/pythonProject/venv

Base interpreter: /usr/local/bin/python3.11

□ Inherit global site-packages

□ Make available to all projects

○ Previously configured interpreter

Interpreter: <No interpreter>

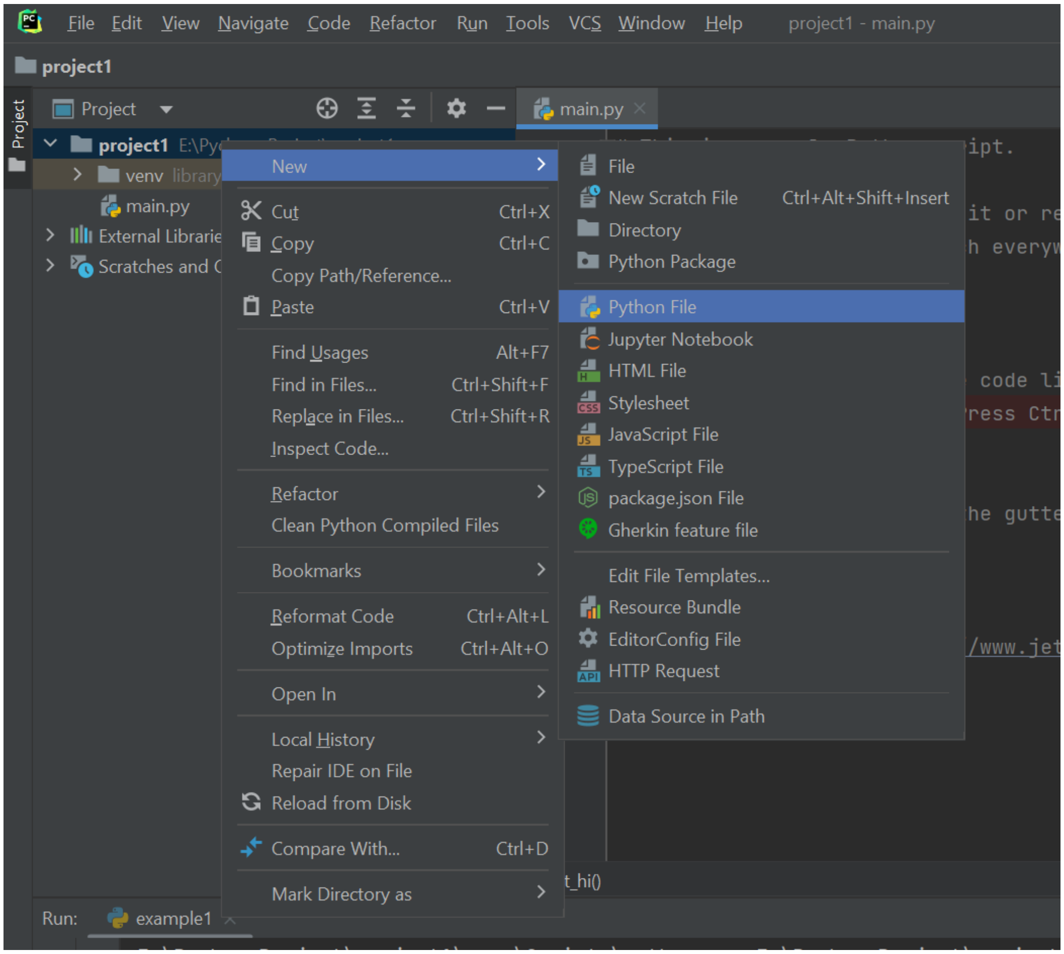
☑ Create a main.py welcome script

Create a Python script that provides an entry point to coding in PyCharm.

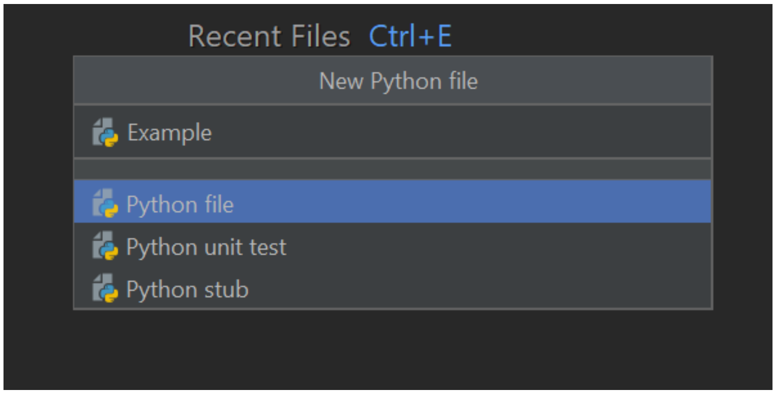
4. Now click the **Create** button at the bottom of the New Project dialog.

Create a Python file

1. In the Project tool window, select the project root (typically, it is the root node in the project tree), **right-click** it (or click **File**), and select **New** | **Python File**.



2. Type the new filename. Then PyCharm creates a new Python file and opens it for editing.



Run the Python file

Use either of the following ways to run your code:

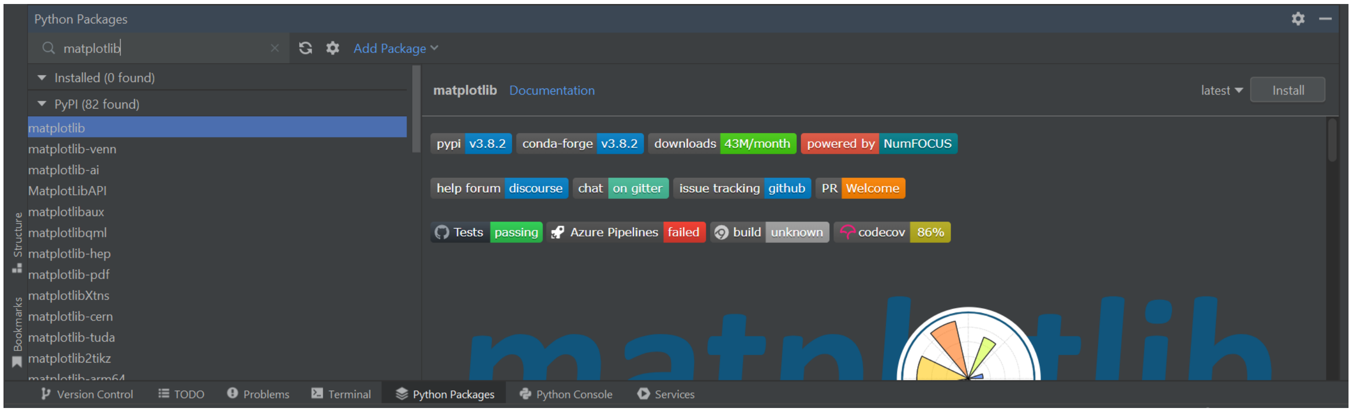
- Right-click the editor and select Run 'Your File Name' from the context menu.
- For Windows, press Ctrl+Shift+F10 (or Shift+F10). For Mac, press Ctrl+Shift+R (or Ctrl+R).

Install packages

The **Python Packages** tool window provides the quickest and neat way to preview and install packages for the currently selected Python interpreter. This tool window is enabled by default, and you can open it by clicking Python Packages. At any time you can open it using the main menu: **View** | **Tool Windows** | **Python Packages**.

To install packages

1. Start typing the package name in the search field of the **Python Packages** tool window. The matching packages are displayed.
2. Select the package you want and **install**.



For further detailed information, please visit here.

List of packages needed:

- numpy
- matplotlib
- torch
- h5py
- scipy