

PennyLane installation instructions

To install PennyLane locally it's strongly recommended that you create a new virtual environment to avoid any installation issues. You can create a virtual environment with venv and install PennyLane as follows:

Mac & Windows

1. Download Python 3.9 or newer [here](#) (3.10 recommended).
2. Double-click on the .pkg file (Mac) or .exe file (Windows).
3. Double-click on the *Install Certificates.command* file. It will open a terminal/command line window. You can close it after it says "process completed".
4. Open your terminal/command line.
5. Create the directory for your virtual environment with: **mkdir ~/.virtualenvs**
6. Create a new virtual environment with:
python3.X -m venv ~/.virtualenvs/new_venv
where X is the version of Python you installed. E.g. if you installed Python 3.10 then start with **python3.10**
You can change **new_venv** to whatever name you want for your environment.
7. Activate the environment with:
source ~/.virtualenvs/new_venv/bin/activate
8. Install PennyLane with: **python -m pip install pennylane**
9. Install other useful packages such as Jupyter and Matplotlib with:
python -m pip install jupyter matplotlib
10. Write **jupyter notebook** in your terminal/command line and you will be ready to create programs using PennyLane.

Every time you want to use PennyLane make sure to open a new terminal/command line, activate the environment with step 7, and open a Jupyter notebook with step 10.

You can also watch the video [here](#) for detailed PennyLane installation instructions with Conda.

If you have trouble installing PennyLane locally, you can use [Google Colab](#) and open a new notebook there. Run the following at the beginning of your notebook (including the exclamation mark): **!pip install pennylane**