

# Instructions for Windows Users

This guid will go over how to use Python and Unix tools directly in Windows via Anaconda and Cygwin  
[Covered Here](#)

1. Installing Unix tools on Windows via Cygwin
2. Install Python via Anaconda
3. Opening a Bash shell (For Unix Commands)
4. Opening a Python interpreter
5. Opening Jupyter Notebooks

## Installing Unix tools on Windows via Cygwin

Installing Git for Windows gives you convenient access to a command-line environment with common Unix tools like grep, sort, cut, or curl.

Download the latest Windows installer  
from: <https://www.cygwin.com/>

Run the installer. Choose any site when  
asked where to download Cygwin from.  
Continue through the installation  
process.

## Cygwin

Get that [Linux](#) feeling - on Windows

### This is the home of the Cygwin project

#### What...

...is it?

Cygwin is:

- a large collection of GNU and Open Source tools which provide functionality similar to a [Linux distribution](#) on Windows.
- a DLL (cygwin1.dll) which provides substantial POSIX API functionality.

#### Cygwin version

The most recent version of the Cygwin DLL is [3.5.3](#).

The Cygwin DLL currently works with all recent, commercially released x86\_64 versions of Windows, starting with 1

#### Note to users of older Windows versions

Cygwin 3.4.10 was the last Cygwin version supporting Windows 7, Windows 8, Windows Server 2008 R2 and Windo packages will still run on these systems. If you need Cygwin on these or even older systems, consider using the [Cygw](#)

#### Installing Cygwin

Install Cygwin by running [setup-x86\\_64.exe](#)

Use the setup program to perform a [fresh install](#) or to [update](#) an existing installation.

Keep in mind that individual packages in the distribution are updated separately from the DLL so the Cygwin DLL ve

## Installing Python via Anaconda

Go here (<https://docs.conda.io/projects/conda/en/latest/user-guide/install/windows.html>) and click on miniconda installer for Windows.

### 1. Download the installer:

- [Miniconda installer for Windows](#)
- [Anaconda Distribution installer for Windows](#)
- [Miniforge installer for Windows](#)

This will take you to <https://docs.anaconda.com/miniconda/>. Scroll down and click on Miniconda3 Windows 64-bit.

## Latest Miniconda installer links

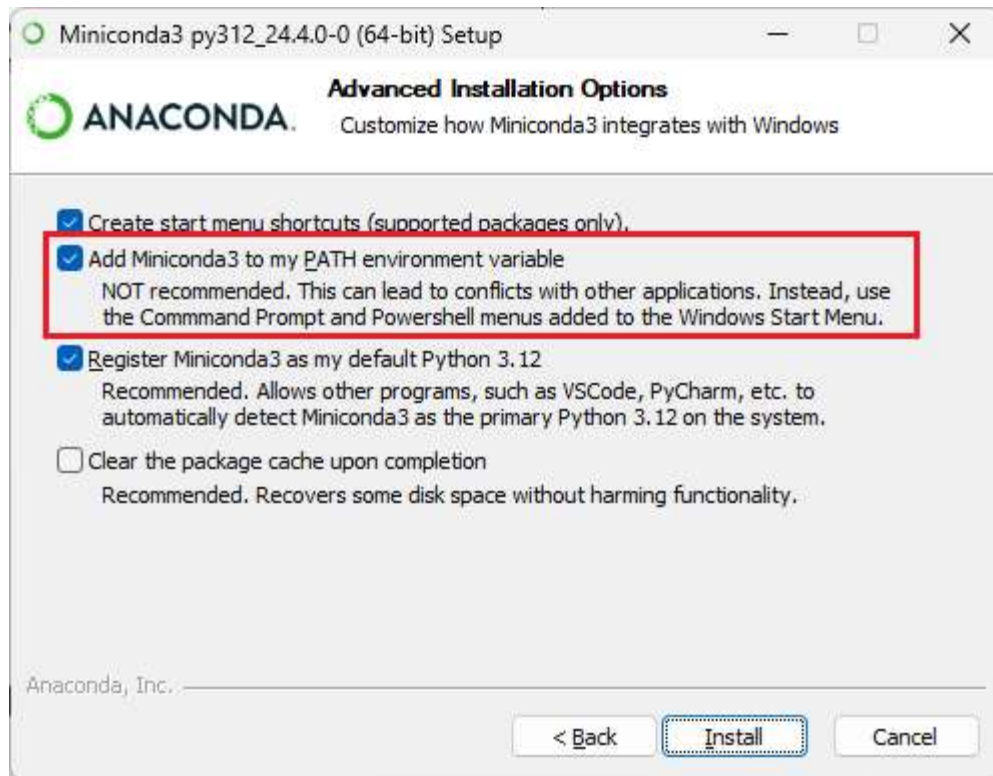
This list of installers is for the latest release of Python: 3.12.3. For installers for older versions of Python, see [Other installer links](#). For an archive of Miniconda versions, see <https://repo.anaconda.com/miniconda/>.

Latest - Conda 24.4.0 Python 3.12.3 released May 20, 2024

Platform	Name	SHA256 hash
Windows	<a href="#">Miniconda3 Windows 64-bit</a>	<a href="#">f4d6147b40ea6822255c2dcec8bb0d357c09e230976213f70d7b8c4a10d86bb0</a>

Once it's downloaded, run the installer.

When you reach "Advanced installation options," make sure to check "Add Miniconda3 to my PATH environment variable"

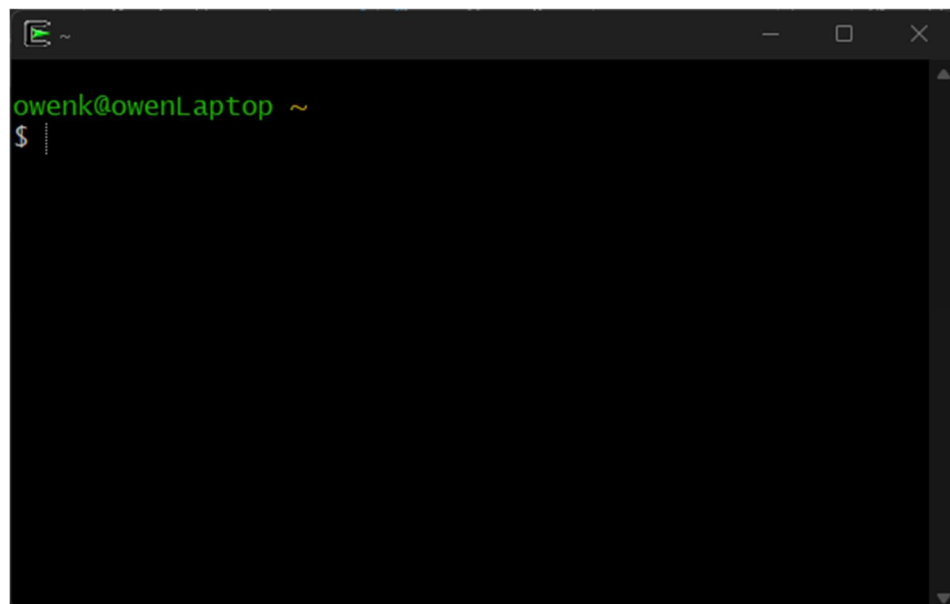


## Opening a Bash Terminal (For Unix Commands)

Run Cygwin64 Terminal.

This will open a bash shell that allows you to have access to Unix tools.

We will teach you how to use Unix commands in the Bash shell to manipulate your files.

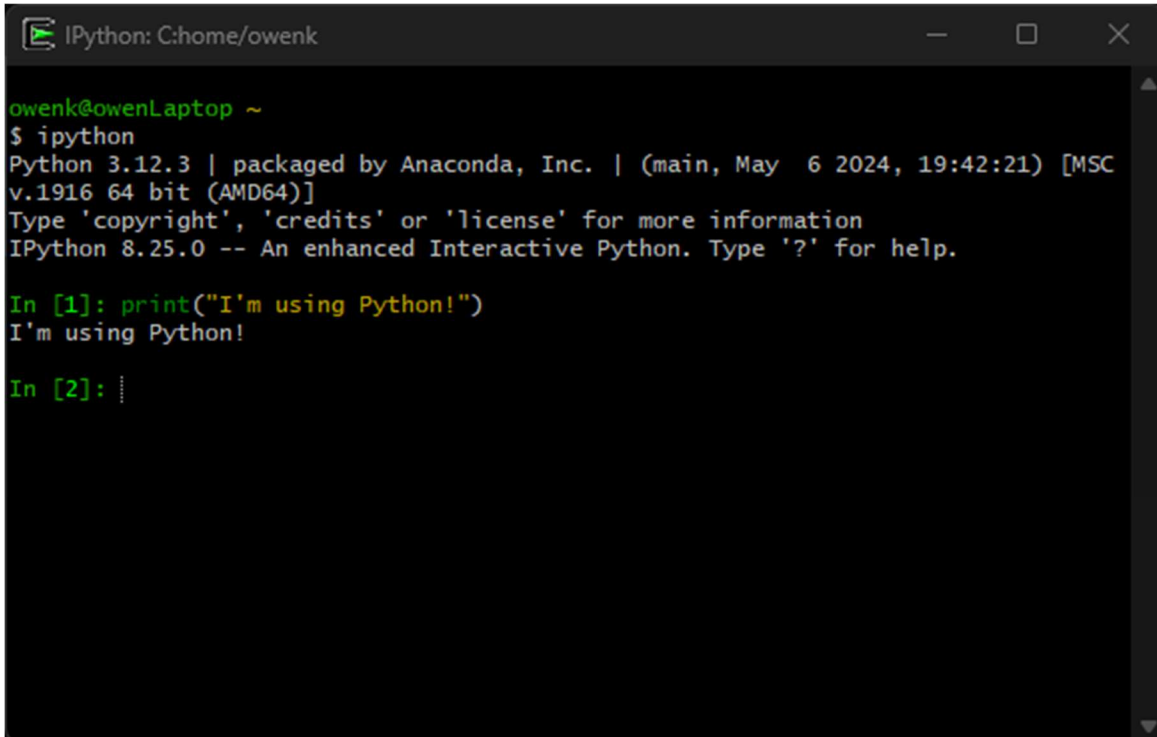


## Opening a Python Interpreter

There are a few ways you can use Python. One useful method is to use the Python interpreter. This gives you the ability to enter in commands, one line at a time, to interactively explore data and run analyses. This is similar to how you might interact with MATLAB or R.

To use the Python interpreter, open up a terminal by running cygwin.

In the terminal, just type **ipython**, and the Python interpreter will begin.

A screenshot of a terminal window titled "IPython: C:\home\owenk". The terminal shows the command prompt "owenk@owenLaptop ~" and the user typing "\$ ipython". The output shows "Python 3.12.3 | packaged by Anaconda, Inc. | (main, May 6 2024, 19:42:21) [MSC v.1916 64 bit (AMD64)]" and "IPython 8.25.0 -- An enhanced Interactive Python. Type '?' for help." The user then types "In [1]: print('I'm using Python!)" and the output is "I'm using Python!". The prompt "In [2]:" is visible at the bottom.

```
IPython: C:\home\owenk

owenk@owenLaptop ~
$ ipython
Python 3.12.3 | packaged by Anaconda, Inc. | (main, May 6 2024, 19:42:21) [MSC
v.1916 64 bit (AMD64)]
Type 'copyright', 'credits' or 'license' for more information
IPython 8.25.0 -- An enhanced Interactive Python. Type '?' for help.

In [1]: print("I'm using Python!")
I'm using Python!

In [2]:
```

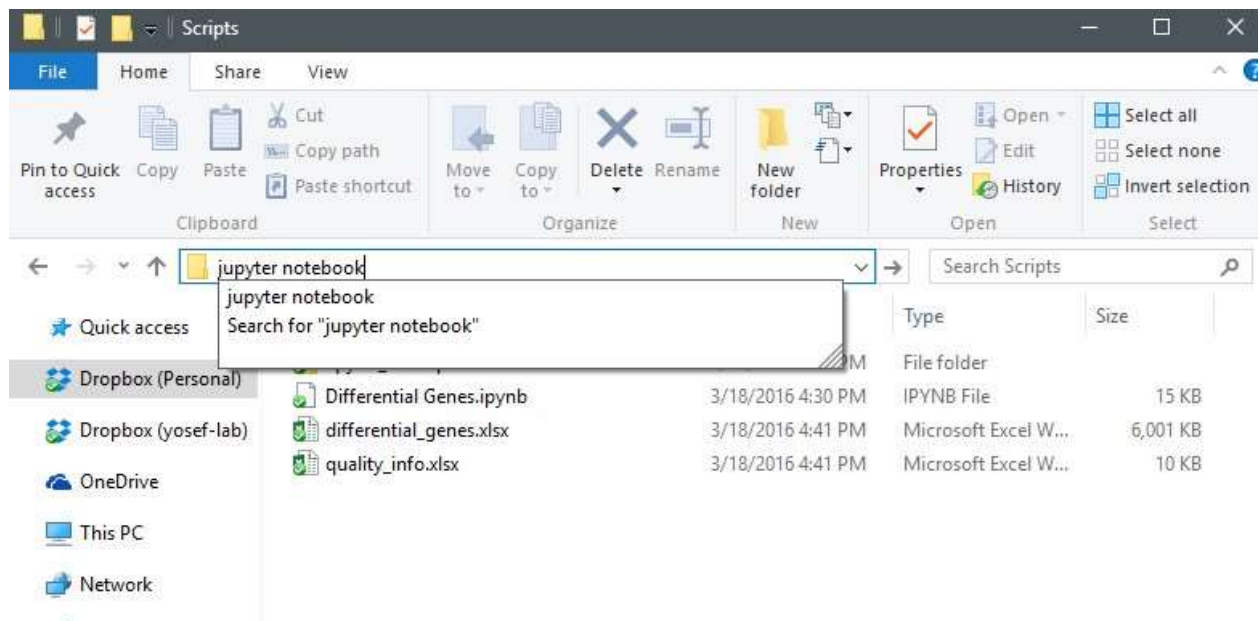
## Opening Jupyter Notebooks

Jupyter Notebooks are a great tool for working with and demonstrating data analysis scripts written in Python. We'll be teaching you how to use it in the class. This document just shows how to run the program in Windows.

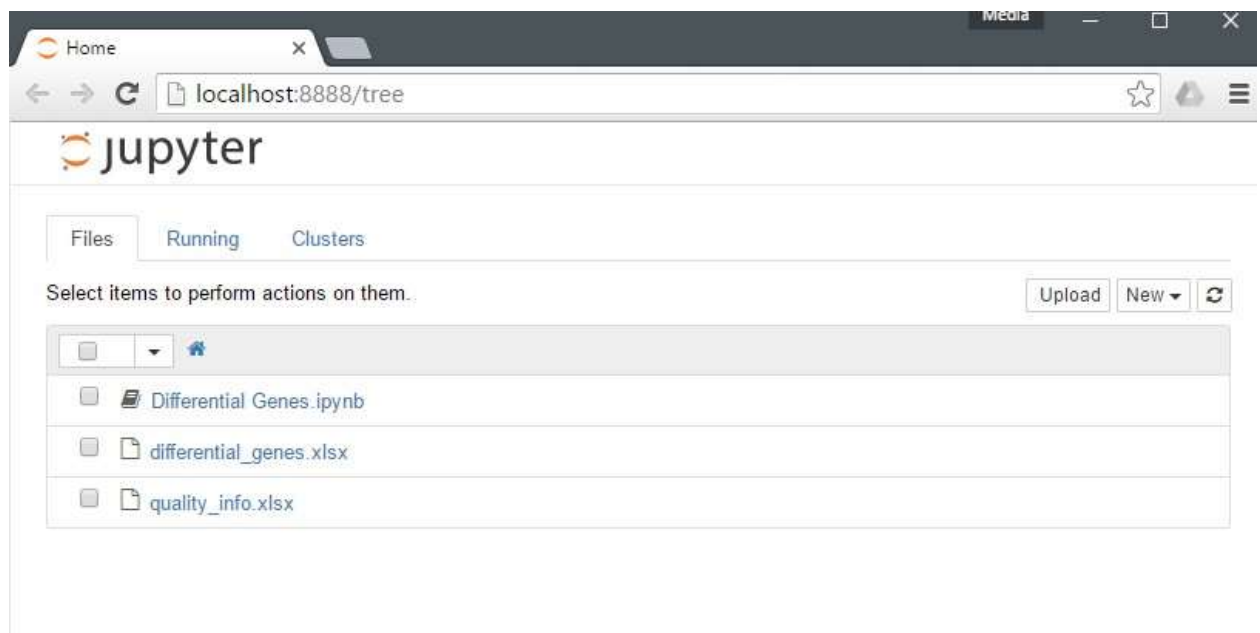
Jupyter Notebooks are saved in files with a .ipynb extension. To open them, you must run the notebook server from the folder containing the file (or from a folder higher in the hierarchy).

To run the notebook server, you can either:

- Open a terminal (from the correct folder) and type **jupyter notebook** and hit enter
- **Or**, as a shortcut, just type **jupyter notebook** in the address bar in the Windows Explorer and hit enter



*Shortcut to launch Jupyter Notebooks from within a folder*



*The result: Jupyter Notebook launches in a new browser window*