



# Introduction to Python and Data Analysis

## Installation Guide



## Installing Python and libraries

### Introduction

This document is to guide users into installation of Python and required libraries for the training. This document should be accompanied by three other files, which are listed below

### Contents

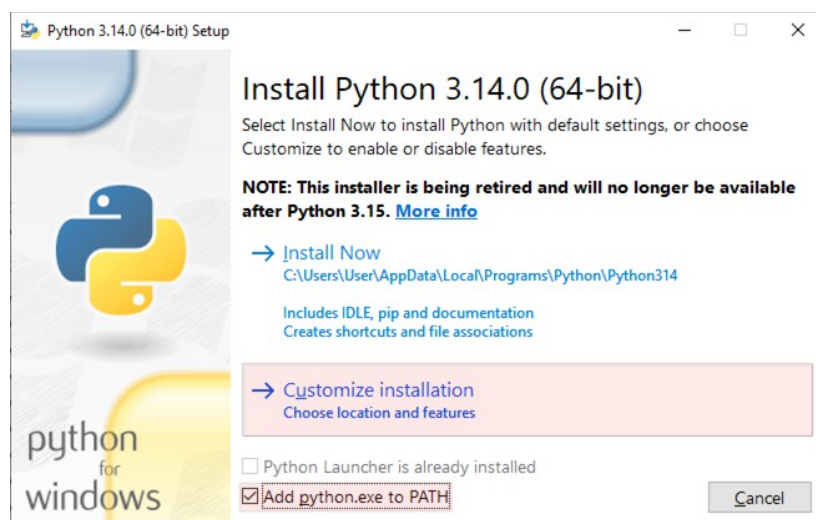
1. **Install.py**: install all the libraries used for the training
2. **dos Prompt.py**: launches an MS DOS application
3. **pip commands.txt**: Pip commands

Instructions (Requires Internet access and Admin privileges on your Laptop)

1. Download Python application version 3.14
  - **Python Homepage**: <https://www.python.org/>
  - **Python Versions**: <https://www.python.org/downloads/>
  - **Python Application Download link**:  
<https://www.python.org/ftp/python/3.14.0/python-3.14.0-amd64.exe>
2. Run the Python application (Installation to follow)
3. Copy the three (Contents above) files into the Installation folder (c:\python314)
4. Launch a Command Prompt/DOS Prompt and run the install.py file.
  - A launch guide has been included in the following pages.
5. The install.py program will install all the required libraries for this course with a 45 seconds interval.

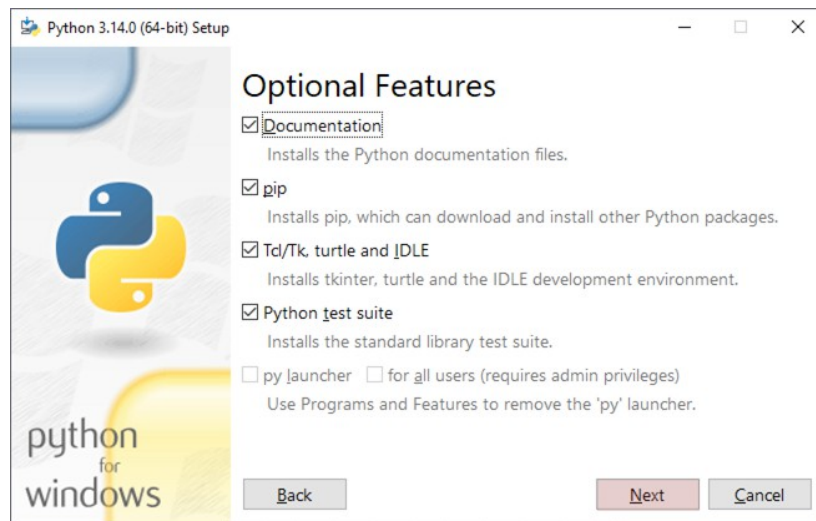
**Launching the Python application will open this setup menu window.**

Select and tick the “Add python.exe to PATH” box and run the “Customer Installation” as shown

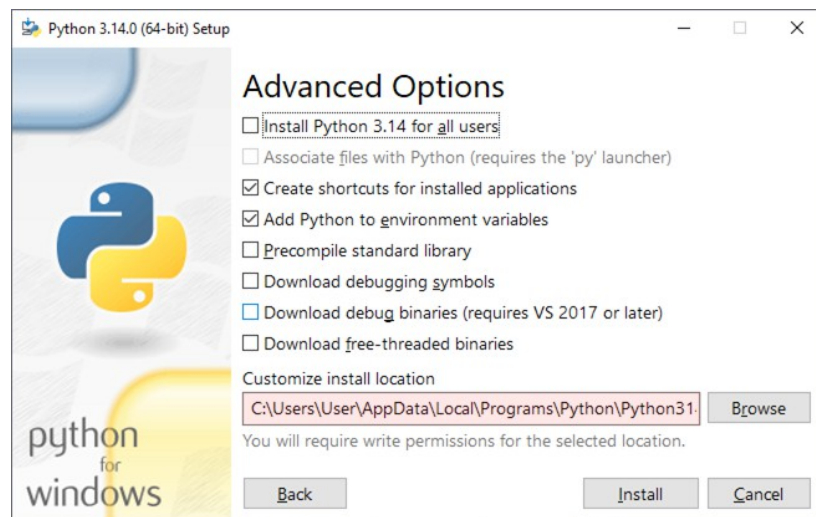


## Installing Python and libraries

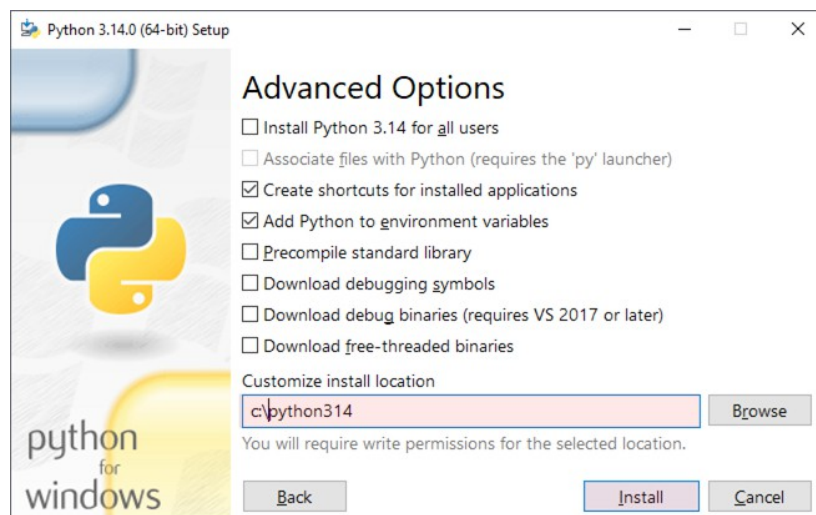
Accept the defaults and select the “Next” button to proceed.



Edit the “Customize Install Location” and change the location to c:\python314

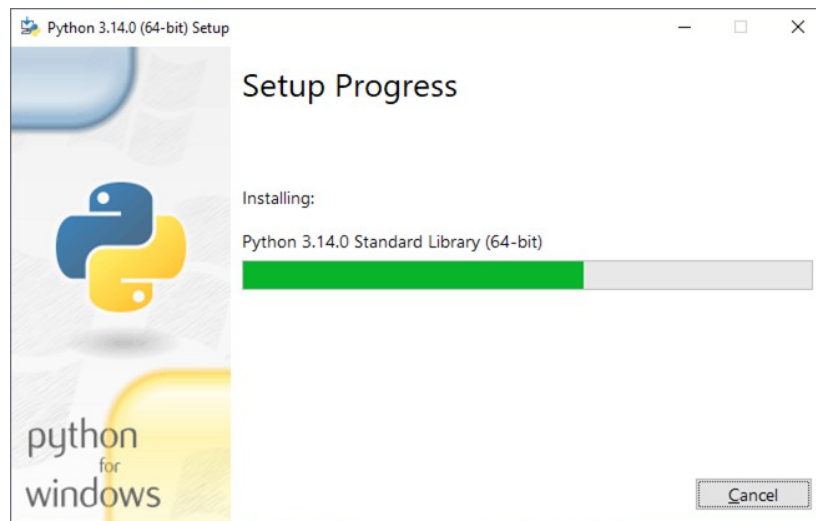


Select the “Install” button after the location has been set.

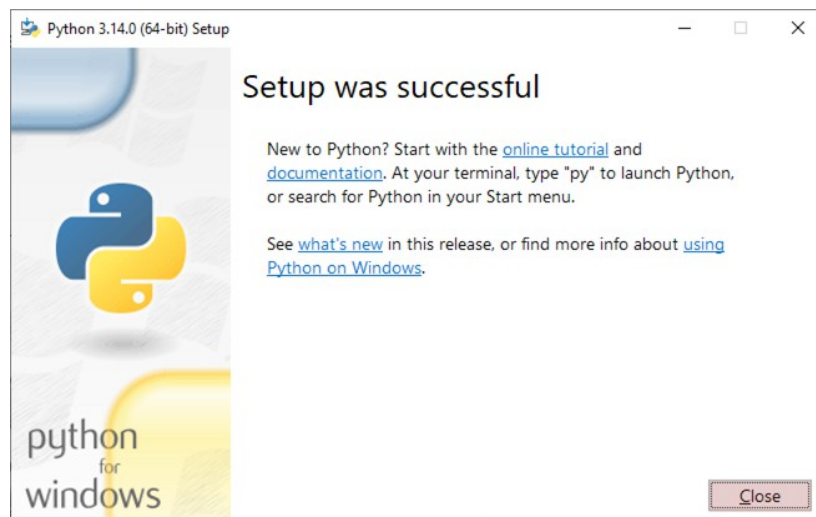


## Installing Python and libraries

Await the Installation of Python 3.14

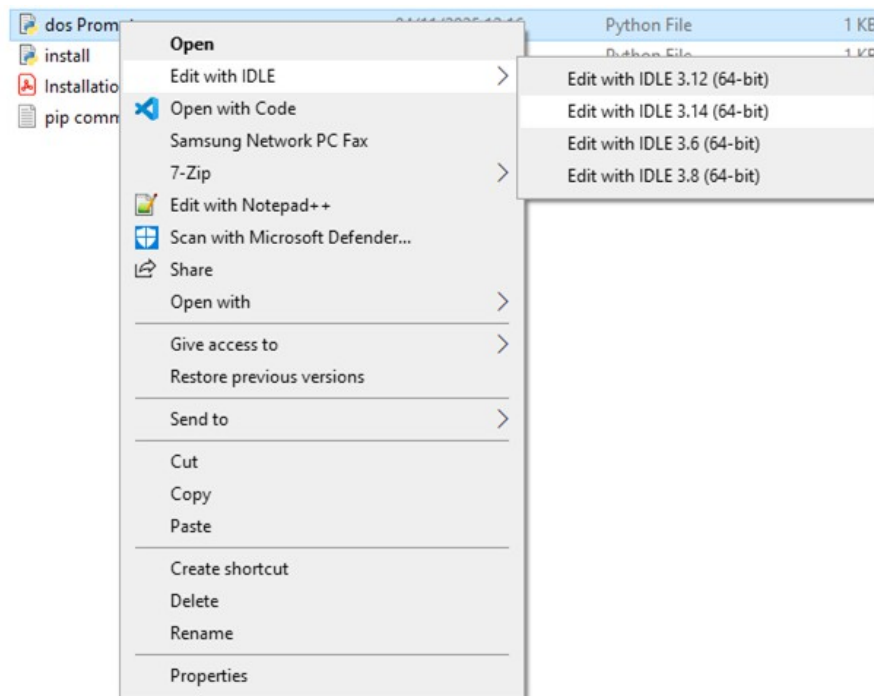


Close the window on completion

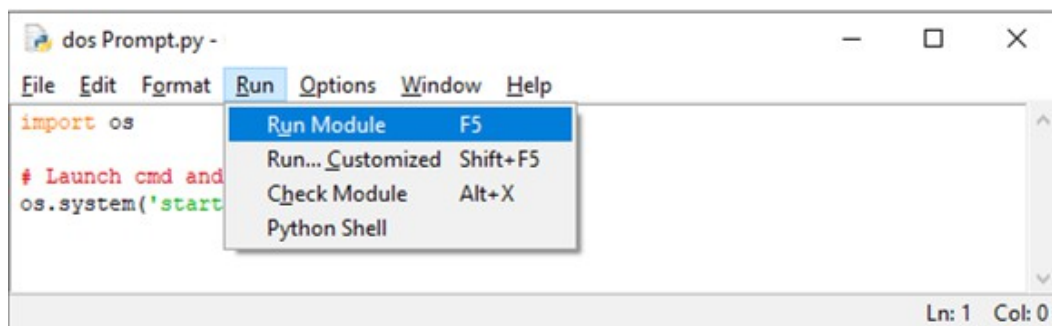


## Installing Python and libraries

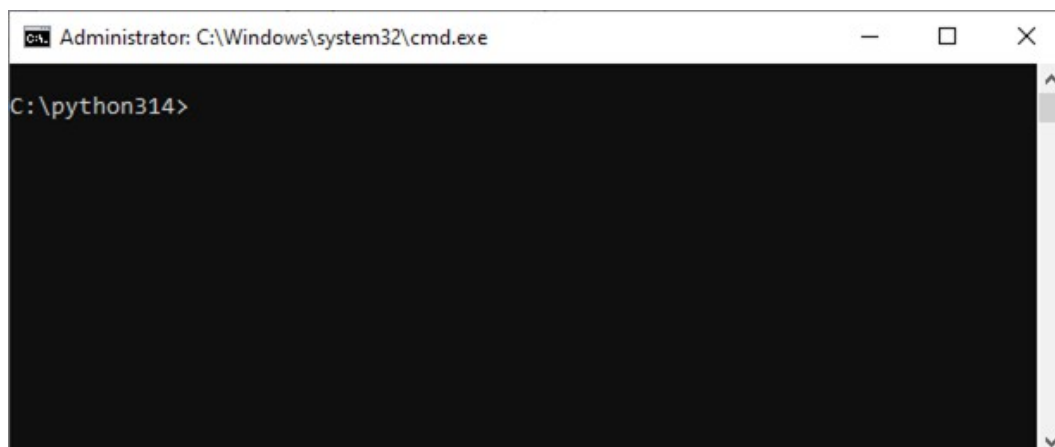
Copy the file contents on Page 1 of this document to the c:\python314 folder  
Open the **dos Prompt.py** file using the mouse menu



Run the **dos Prompt.py** file from the Run menu or use the F5 key, this will open an IDLE window.



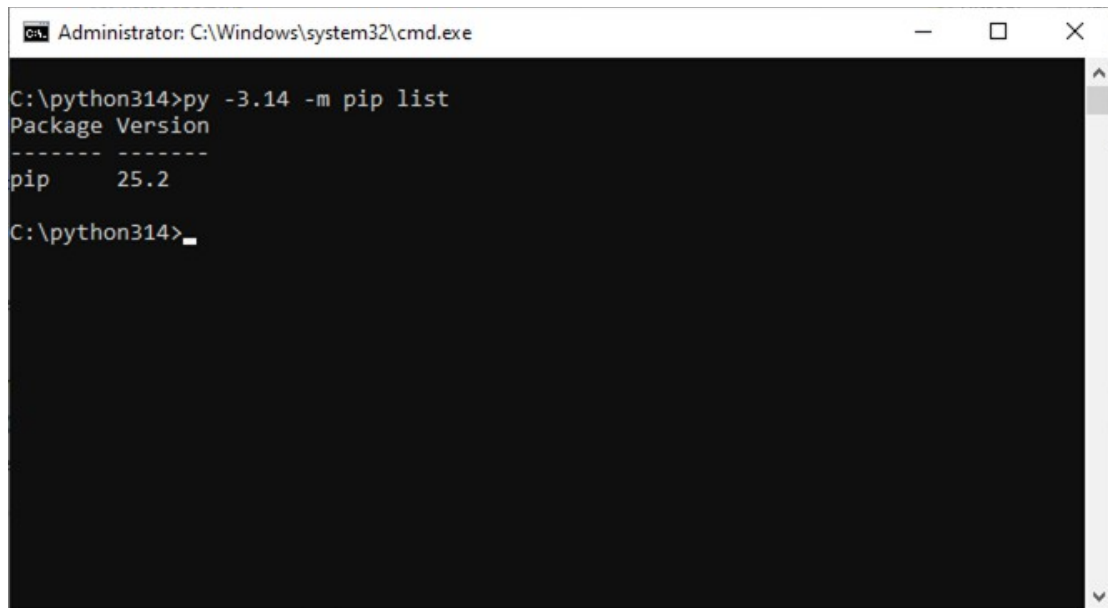
This will launch a DOS prompt and change into the Python installation folder.



## Installing Python and libraries

Enter the following command at the dos prompt for a list of the installed libraries. This will list all the current libraries installed on Python.

py -3.14 -m pip list

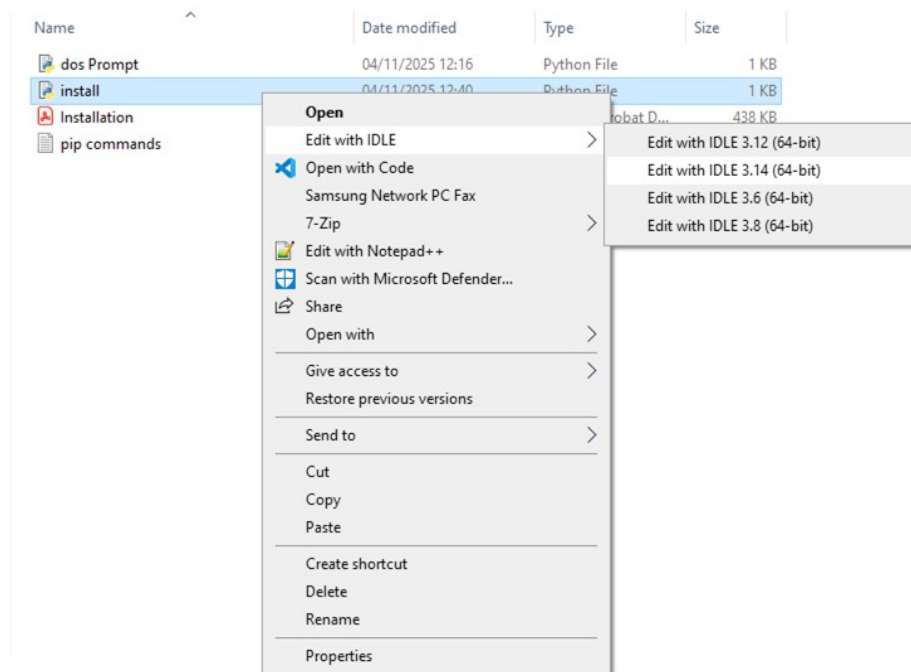


```
Administrator: C:\Windows\system32\cmd.exe

C:\python314>py -3.14 -m pip list
Package Version
-----
pip      25.2

C:\python314>_
```

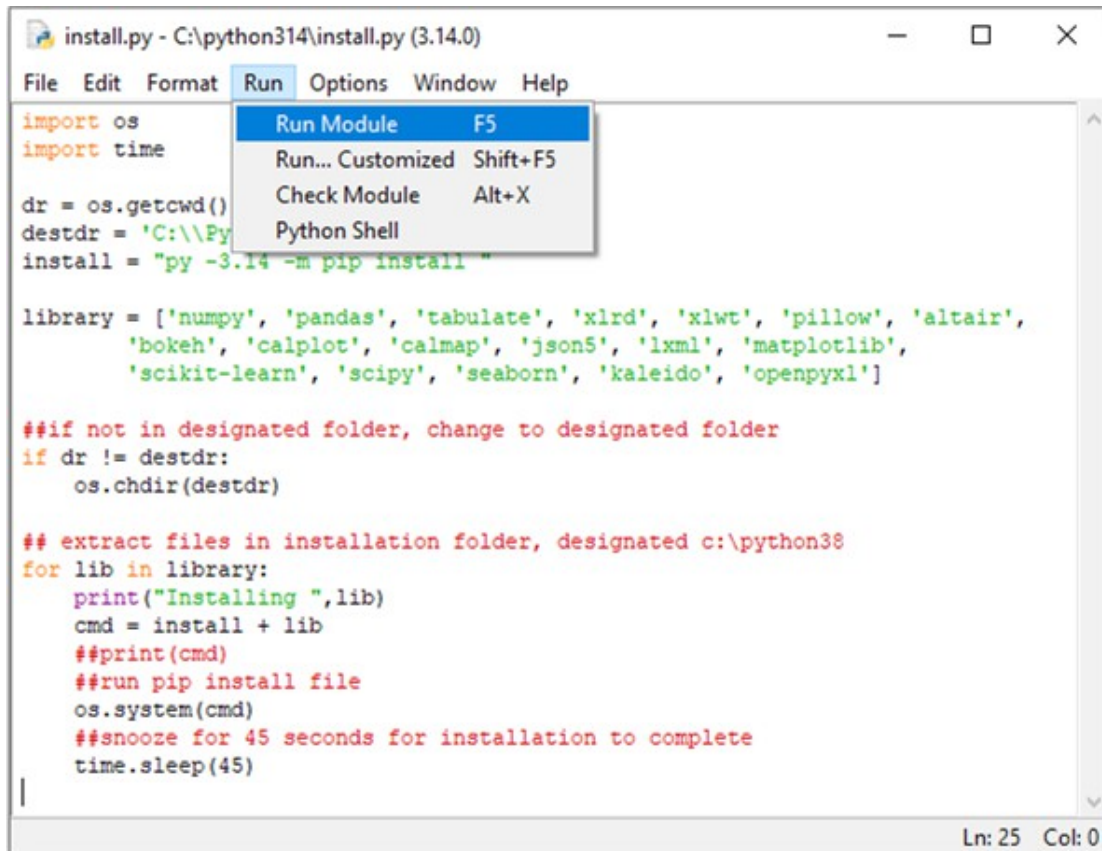
Open the install.py file using the mouse menu.





## Installing Python and libraries

Run the install.py file, this will install the python libraries with a 45 second interval, the installations should take under an hour. Internet access is required



```
install.py - C:\python314\install.py (3.14.0)
File Edit Format Run Options Window Help
import os
import time

dr = os.getcwd()
destdr = 'C:\\Py
install = "py -3.14 -m pip install "

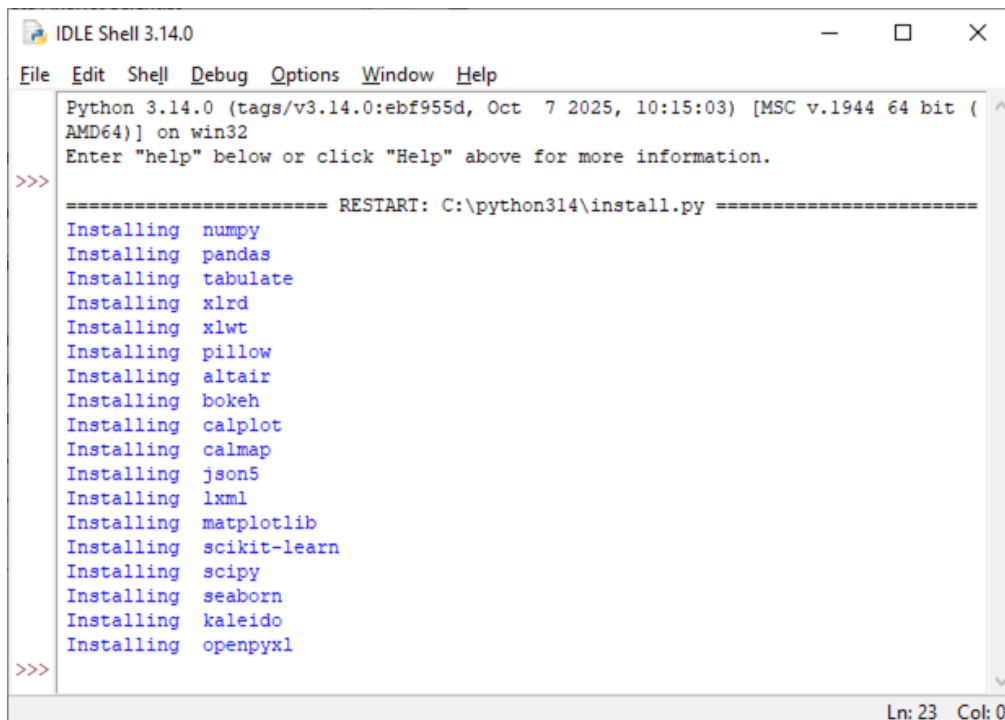
library = ['numpy', 'pandas', 'tabulate', 'xlrd', 'xlwt', 'pillow', 'altair',
           'bokeh', 'calplot', 'calmap', 'json5', 'lxml', 'matplotlib',
           'scikit-learn', 'scipy', 'seaborn', 'kaleido', 'openpyxl']

##if not in designated folder, change to designated folder
if dr != destdr:
    os.chdir(destdr)

## extract files in installation folder, designated c:\python38
for lib in library:
    print("Installing ",lib)
    cmd = install + lib
    ##print(cmd)
    ##run pip install file
    os.system(cmd)
    ##snooze for 45 seconds for installation to complete
    time.sleep(45)
```

Ln: 25 Col: 0

The IDLE window shows all the completed installs



```
IDLE Shell 3.14.0
File Edit Shell Debug Options Window Help
Python 3.14.0 (tags/v3.14.0:ebf955d, Oct 7 2025, 10:15:03) [MSC v.1944 64 bit (
AMD64)] on win32
Enter "help" below or click "Help" above for more information.

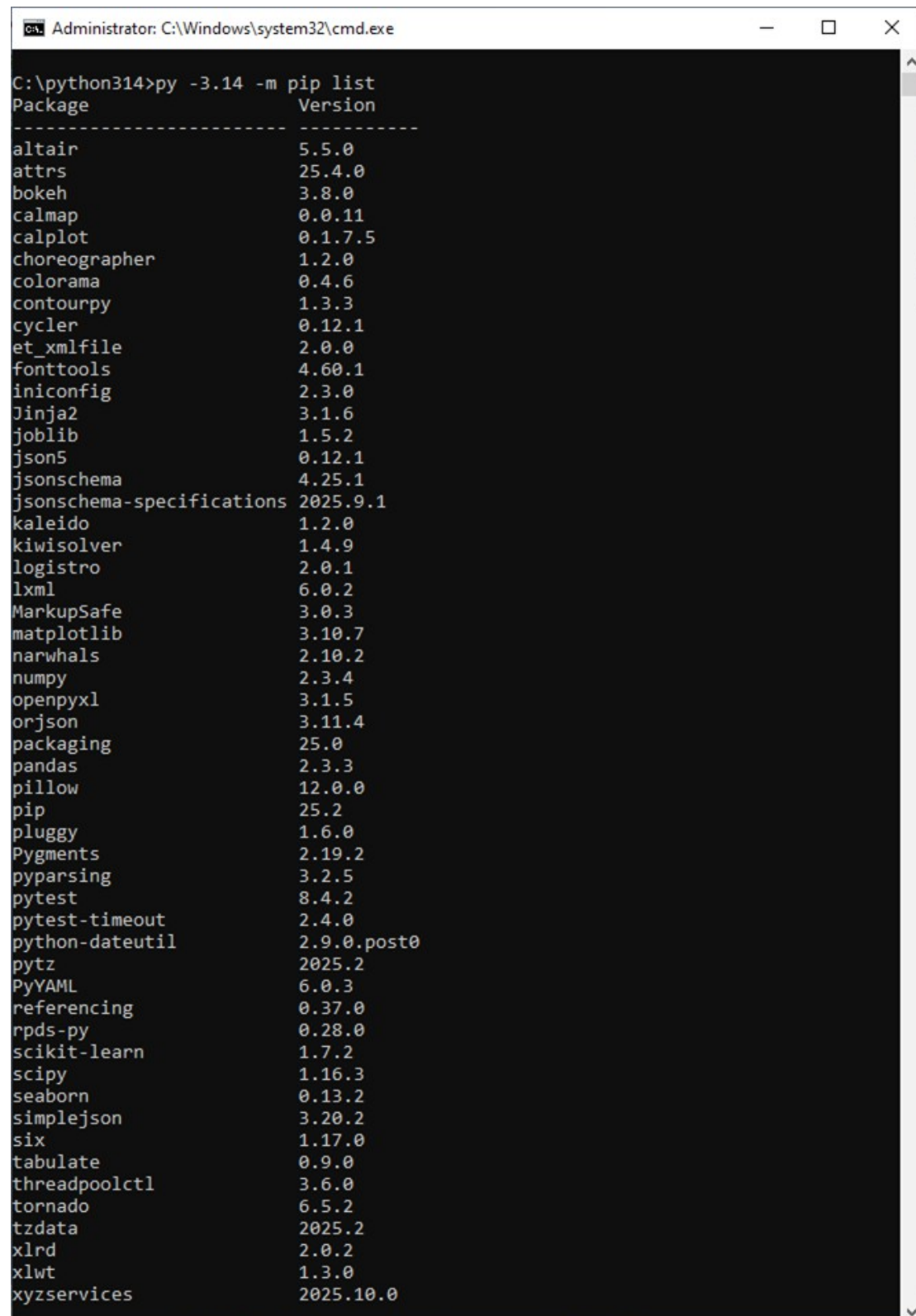
>>>
===== RESTART: C:\python314\install.py =====
Installing numpy
Installing pandas
Installing tabulate
Installing xlrd
Installing xlwt
Installing pillow
Installing altair
Installing bokeh
Installing calplot
Installing calmap
Installing json5
Installing lxml
Installing matplotlib
Installing scikit-learn
Installing scipy
Installing seaborn
Installing kaleido
Installing openpyxl

>>>
```

Ln: 23 Col: 0

## Installing Python and libraries

Running the pip list command at the DOS prompt will display all the newly install libraries on Python.



```
Administrator: C:\Windows\system32\cmd.exe

C:\python314>py -3.14 -m pip list
Package                               Version
-----
altair                                5.5.0
attrs                                 25.4.0
bokeh                                 3.8.0
calmap                                0.0.11
calplot                               0.1.7.5
choreographer                         1.2.0
colorama                              0.4.6
contourpy                             1.3.3
cyclor                                 0.12.1
et_xmlfile                            2.0.0
fonttools                             4.60.1
iniconfig                             2.3.0
Jinja2                                3.1.6
joblib                                 1.5.2
json5                                  0.12.1
jsonschema                            4.25.1
jsonschema-specifications             2025.9.1
kaleido                               1.2.0
kiwisolver                            1.4.9
logistro                              2.0.1
lxml                                   6.0.2
MarkupSafe                            3.0.3
matplotlib                             3.10.7
narwhals                              2.10.2
numpy                                  2.3.4
openpyxl                              3.1.5
orjson                                 3.11.4
packaging                             25.0
pandas                                 2.3.3
pillow                                 12.0.0
pip                                    25.2
pluggy                                1.6.0
Pygments                              2.19.2
pyparsing                             3.2.5
pytest                                8.4.2
pytest-timeout                        2.4.0
python-dateutil                       2.9.0.post0
pytz                                   2025.2
PyYAML                                6.0.3
referencing                           0.37.0
rpds-py                               0.28.0
scikit-learn                          1.7.2
scipy                                  1.16.3
seaborn                               0.13.2
simplejson                             3.20.2
six                                    1.17.0
tabulate                              0.9.0
threadpoolctl                         3.6.0
tornado                               6.5.2
tzdata                                2025.2
xlrd                                   2.0.2
xlwt                                   1.3.0
xyzservices                           2025.10.0
```