AAE2004 Introduction to Aviation Systems
AAE
Design of Path Planning Algorithm for Aircraft Operation

Week 8 (First Week) –
Software Installation and Setup (Windows)

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Software Installation and setup Guide

Install Python in Windows 10

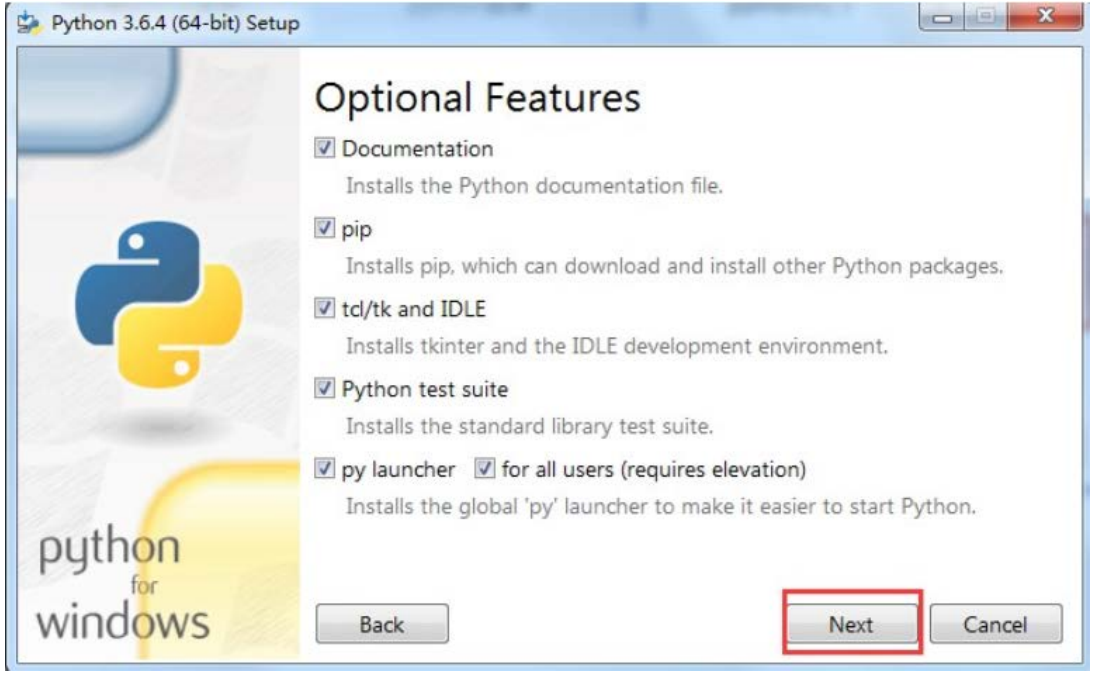
Tutorial Video:
https://www.youtube.com/watch?v=wJEZO8M2j4Q&ab_channel=POLYUIPNL

Step 1: Download Python 3.6.4
https://www.python.org/ftp/python/3.6.4/python-3.6.4-amd64.exe

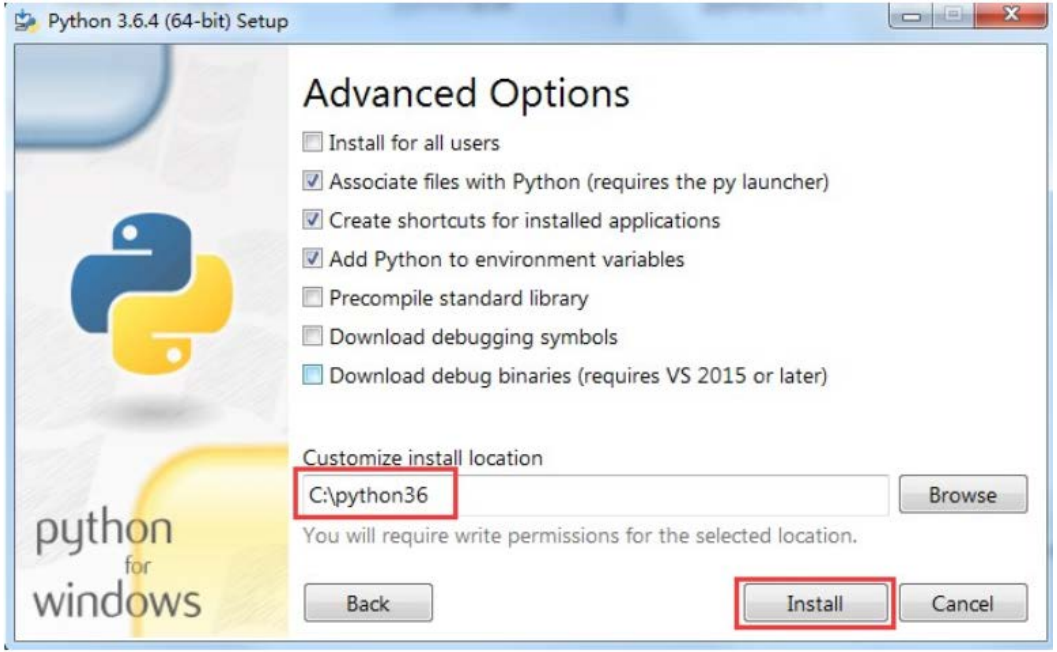
Step 2: Install Python 3.6.4 in Windows 10

Python is an interpreted, high-level, general-purpose programming language. Created by Guido van Rossum and first released in 1991, Python's design philosophy emphasizes code readability with its notable use of significant whitespace.

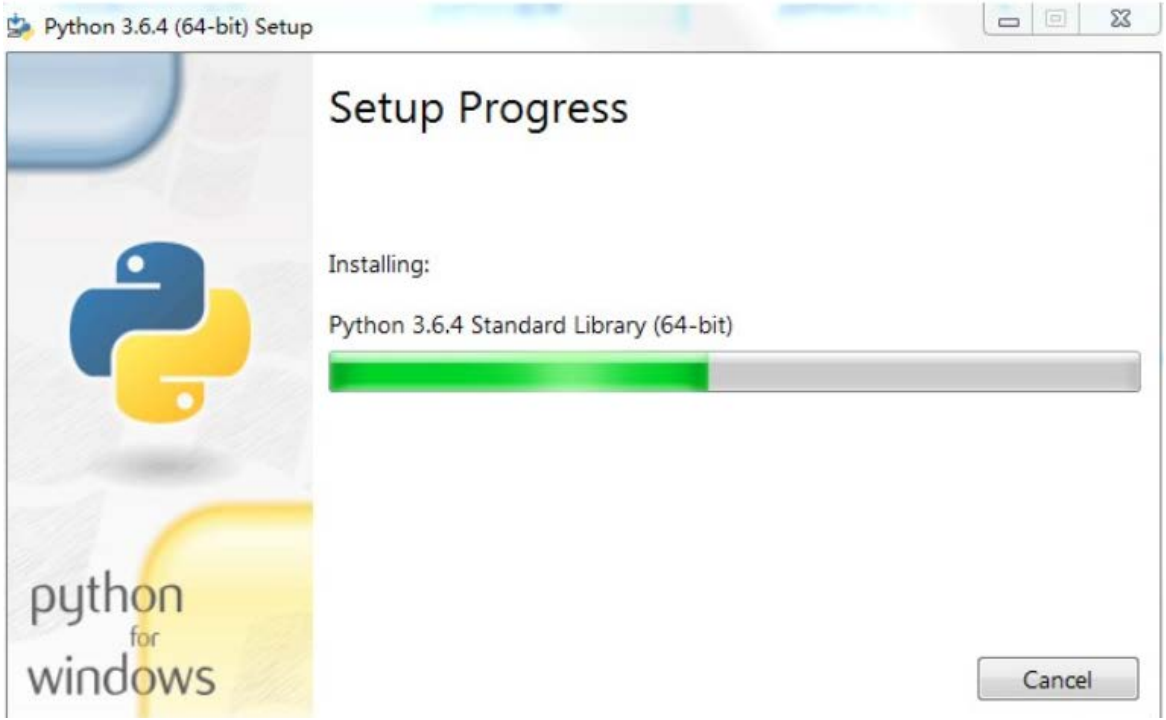
Install Python in Windows 10



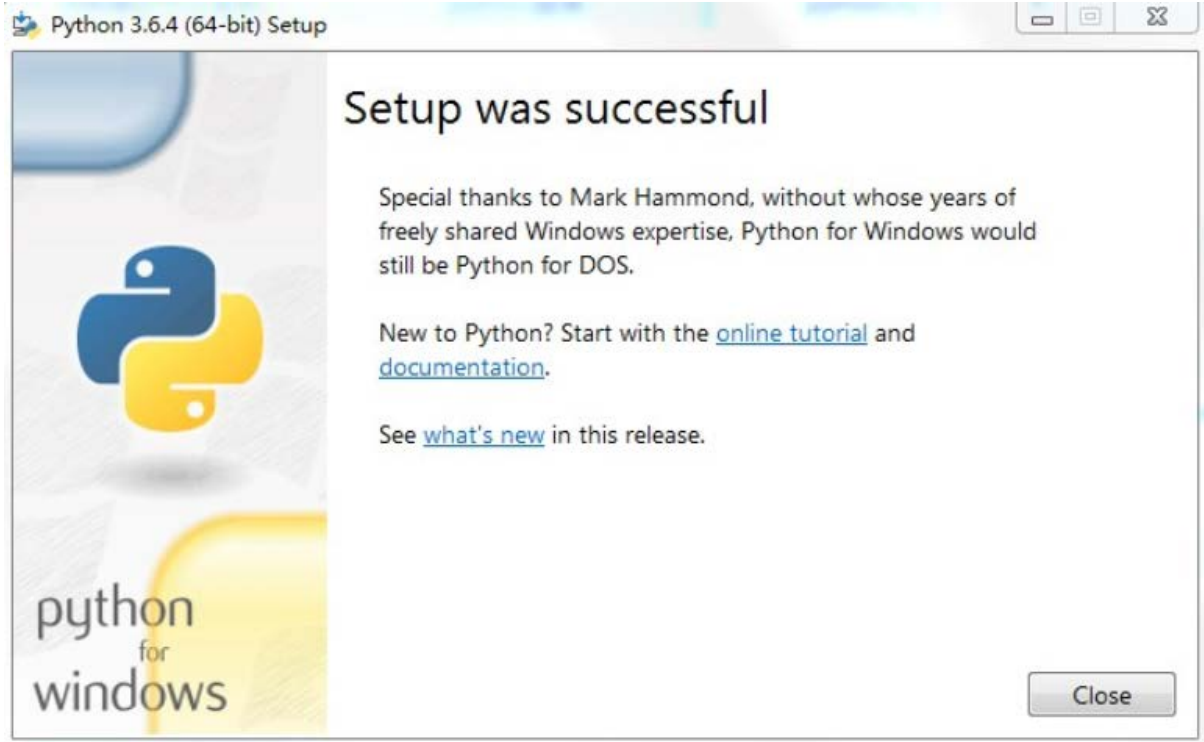
Install Python in Windows 10



Install Python in Windows 10



Install Python in Windows 10

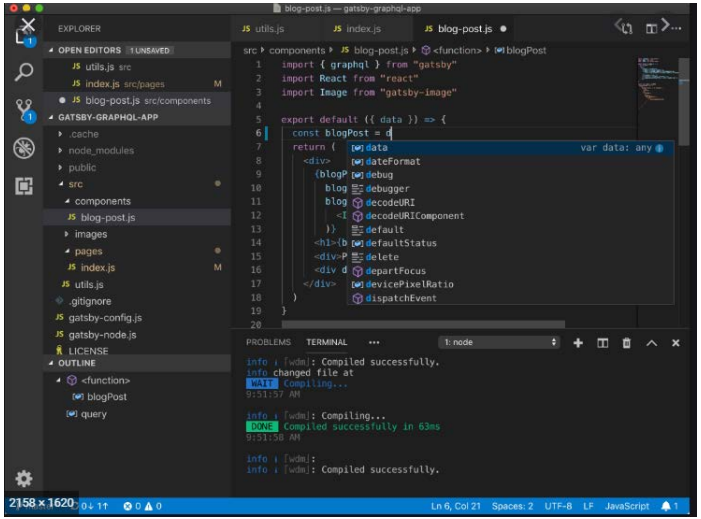


Install VS code in Windows 10

Step 1: Download the latest VS code
https://code.visualstudio.com/download

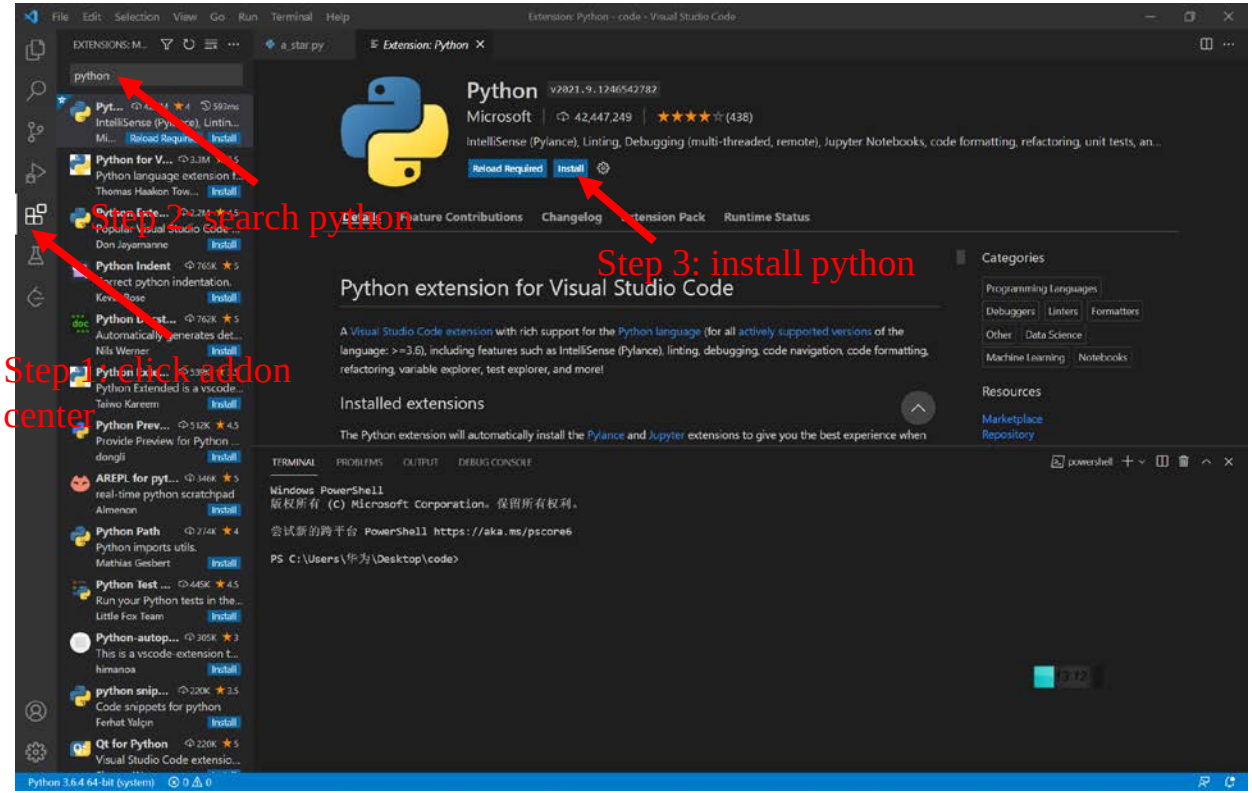
Tutorial Video:
https://www.youtube.com/watch?v=MZZw7VU9T4c&ab_channel=POLYUIPNL

Step 2: Install latest VS code in Windows 10

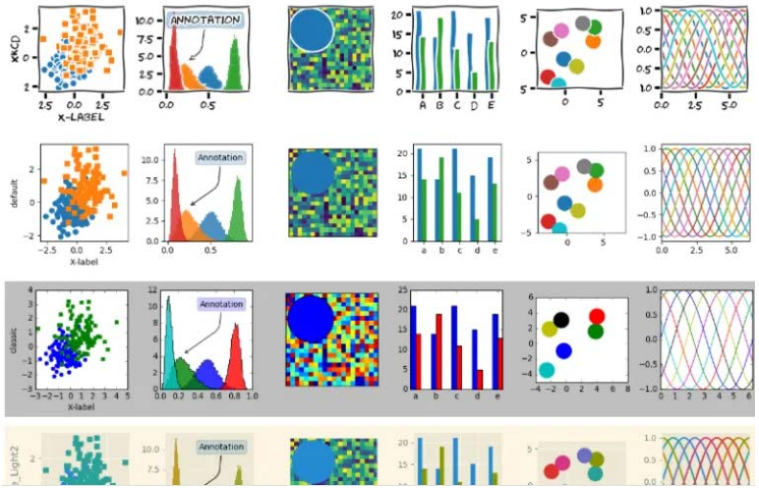


Visual Studio Code is a free source-code editor made by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git.

Install Python addon in VS code in Windows 10



Install matplotlib

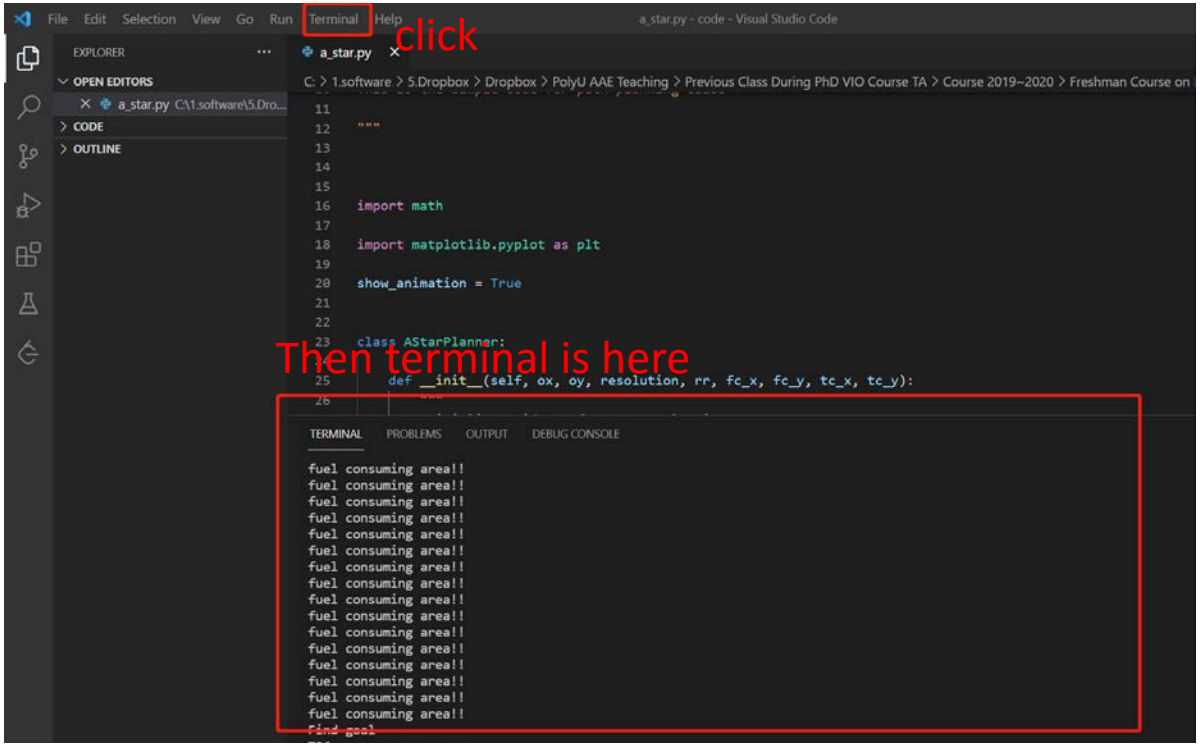


Source:
https://www.gnuband.org/2017/12/29/gallery-of-xkcd-and-other-python-matplotlib-styles/

Matplotlib is a plotting library for the Python programming language and its numerical mathematics extension NumPy. It provides an object-oriented API for embedding plots into applications using general-purpose GUI toolkits like Tkinter, wxPython, Qt, or GTK+.

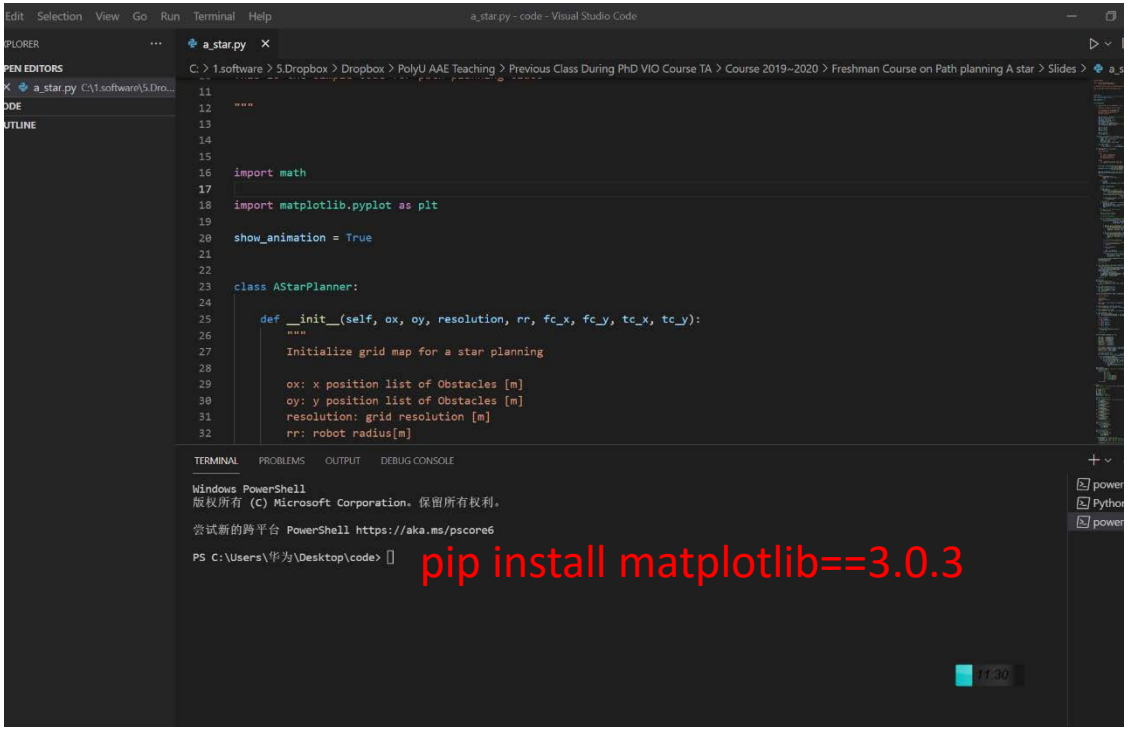
Install matplotlib

- step 1: Open VS code, and then click Terminal



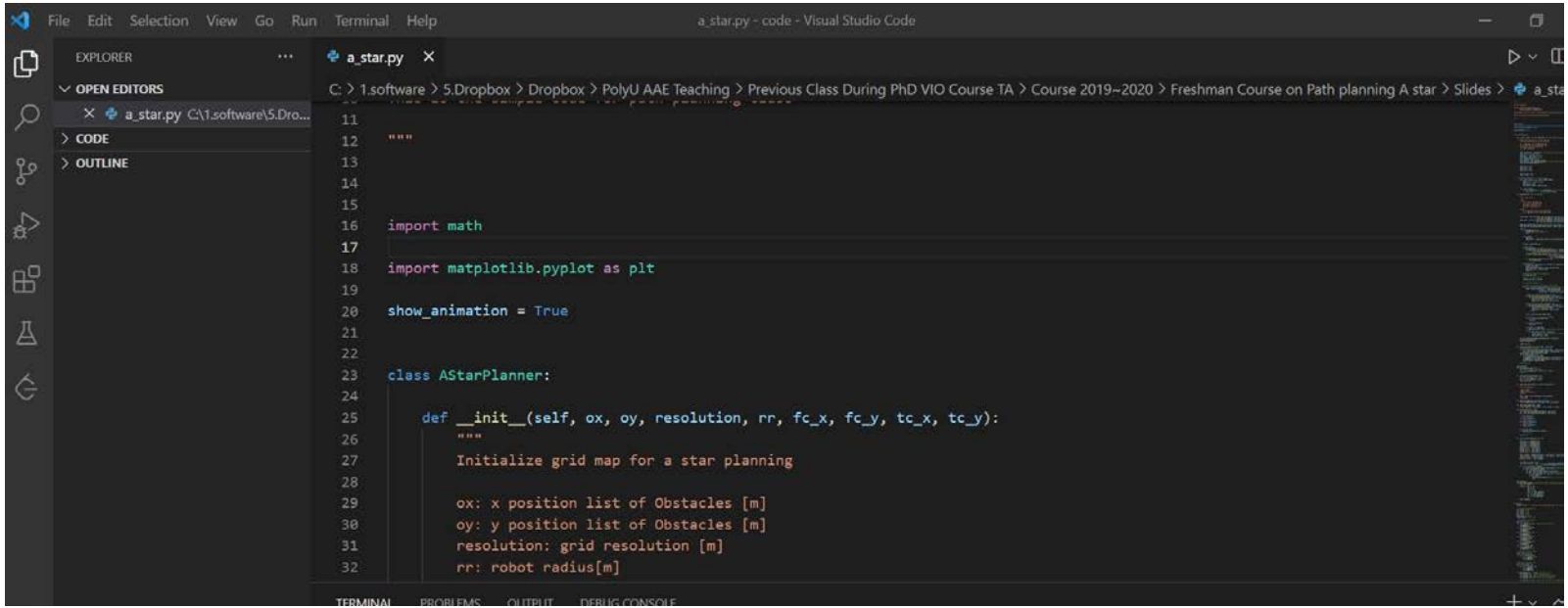
Install matplotlib

➢step 2: Print following command into terminal>



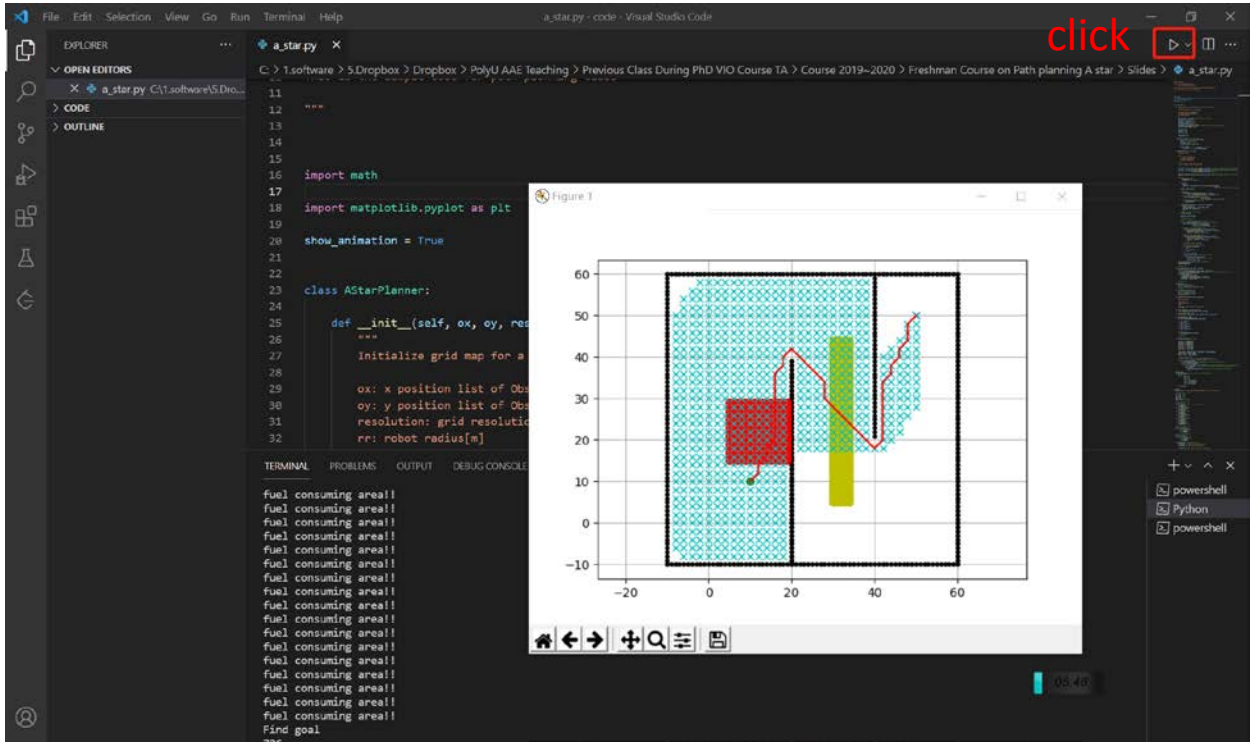
Test matplotlib

- step 3: Open the code sample by VS code



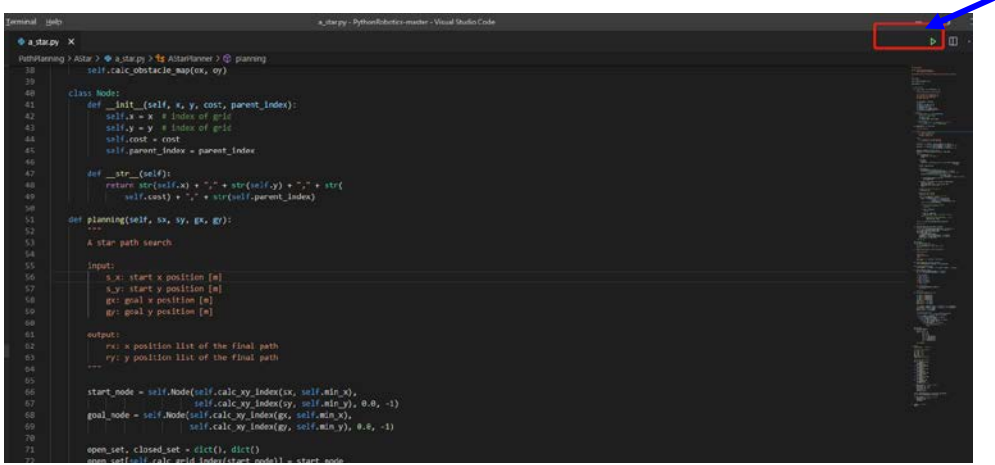
Test matplotlib

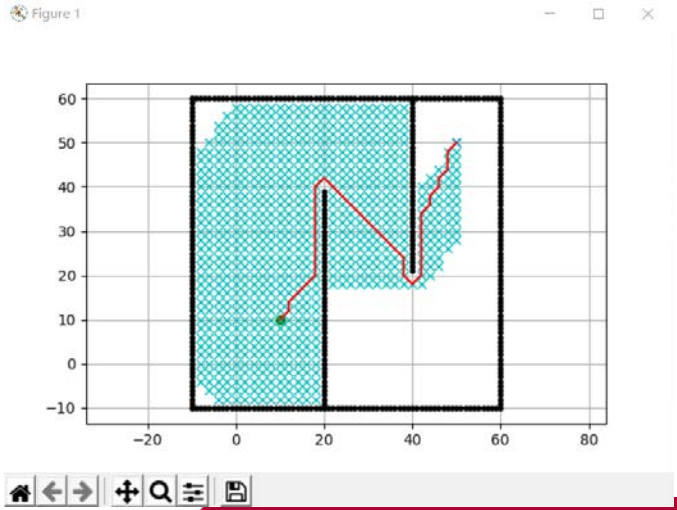
- step 4: Run the demo



Run A Star in VS code

Run the code





A* is a graph traversal and path search algorithm, which is often used in many fields of computer science due to its completeness, optimality, and optimal efficiency. One major practical drawback is its space complexity, as it stores all generated nodes in memory.

Troubleshot: Connect Github page via command in VS Code

- Input the command below to the terminal (change the blue to your info)
  - *git config --global user.name weisongwen*
  - *git config --global user.email wenwsrobo@gmail.com*