

Window 환경설정

ai-contents

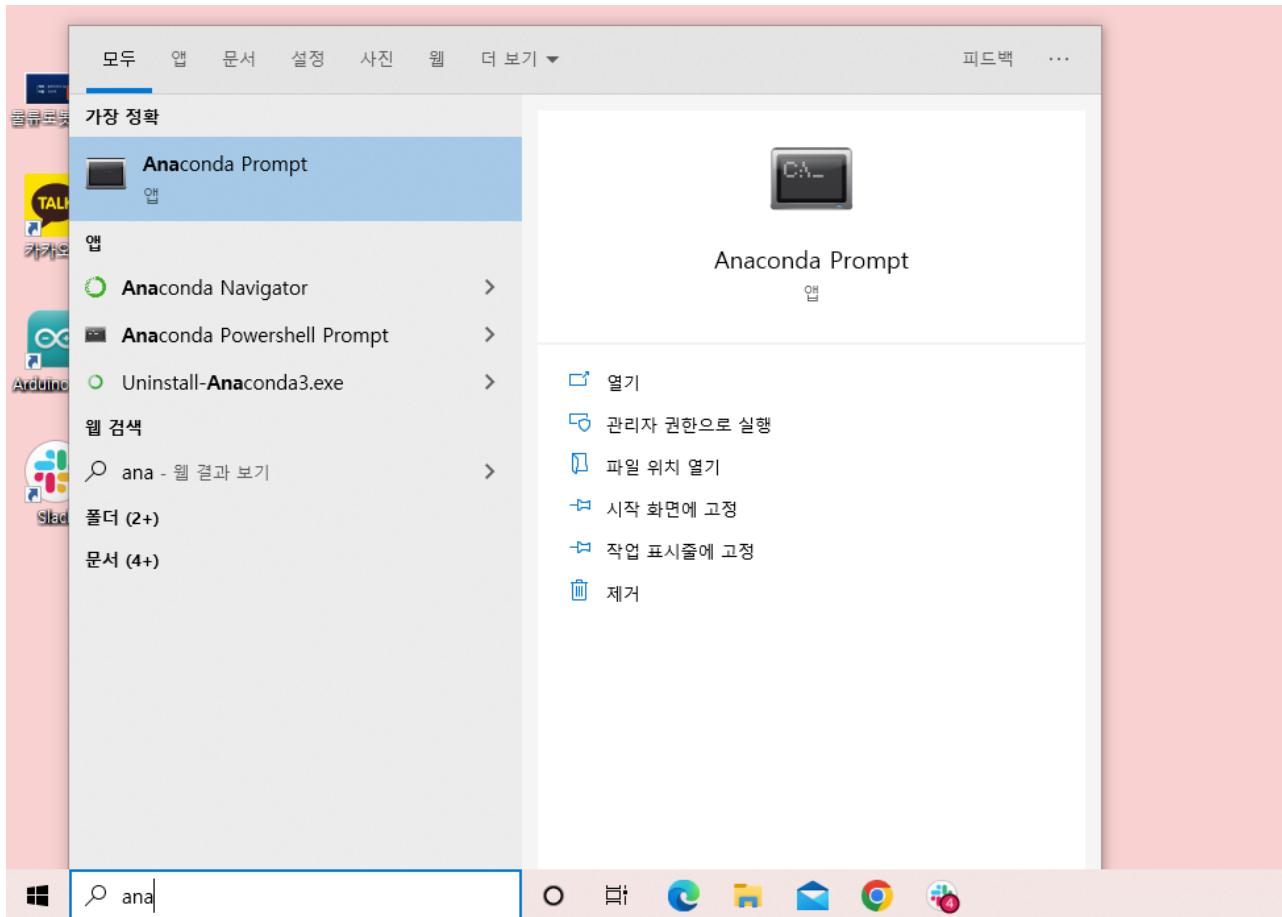
Exported on 06/18/2023

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1 anaconda 설치

<https://www.anaconda.com/>



1 아나콘다 진입

2 🍷 가상환경 생성

```
$ conda create -n <venv_name> python=<python_version>
```

```
(base) C:\Users\WJ>conda create -n cv_tutorial python=3.9
Collecting package metadata (current_repodata.json): done
Solving environment: done
```

```
==> WARNING: A newer version of conda exists. <==
  current version: 23.1.0
  latest version: 23.3.1
```

Please update conda by running

```
$ conda update -n base -c defaults conda
```

Or to minimize the number of packages updated during conda update use

```
conda install conda=23.3.1
```

Package Plan

environment location: C:\Users\WJ\anaconda3\envs\cv_tutorial

added / updated specs:
- python=3.9

The following packages will be downloaded:

package	build	
certifi-2022.12.7	py39haa95532_0	149 KB
pip-23.0.1	py39haa95532_0	2.7 MB
python-3.9.16	h6244533_2	19.5 MB
setuptools-65.6.3	py39haa95532_0	1.1 MB
sqlite-3.41.1	h2bbff1b_0	897 KB
tzdata-2023c	h04d1e81_0	116 KB
wheel-0.38.4	py39haa95532_0	83 KB
wincertstore-0.2	py39haa95532_2	15 KB
Total:		24.6 MB

The following NEW packages will be INSTALLED:

ca-certificates	pkgs/main/win-64::ca-certificates-2023.01.10-haa95532_0
certifi	pkgs/main/win-64::certifi-2022.12.7-py39haa95532_0
openssl	pkgs/main/win-64::openssl-1.1.1t-h2bbff1b_0
pip	pkgs/main/win-64::pip-23.0.1-py39haa95532_0
python	pkgs/main/win-64::python-3.9.16-h6244533_2
setuptools	pkgs/main/win-64::setuptools-65.6.3-py39haa95532_0
sqlite	pkgs/main/win-64::sqlite-3.41.1-h2bbff1b_0
tzdata	pkgs/main/noarch::tzdata-2023c-h04d1e81_0
vc	pkgs/main/win-64::vc-14.2-h21ff451_1
vs2015_runtime	pkgs/main/win-64::vs2015_runtime-14.27.29016-h5e58377_2
wheel	pkgs/main/win-64::wheel-0.38.4-py39haa95532_0
wincertstore	pkgs/main/win-64::wincertstore-0.2-py39haa95532_2

Proceed ([y]/n)? y

2 'y' 입력

```

Downloading and Extracting Packages
Preparing transaction: done
Verifying transaction: done
Executing transaction: done
#
# To activate this environment, use
#
#     $ conda activate cv_tutorial
#
# To deactivate an active environment, use
#
#     $ conda deactivate

```

3 설치 완료

2.1 가상환경 리스트 확인

```
$ conda env list
```

```

(base) C:\Users\WJ>conda env list
# conda environments:
#
base                * C:\Users\WJ\Wanaconda3
cv_tutorial          C:\Users\WJ\Wanaconda3\envs\cv_tutorial

```

4 cv_tutorial 환경이 생겼다

2.2 가상환경 활성화

```
$ conda activate <env_name>
```

```

(base) C:\Users\WJ>conda activate cv_tutorial
(cv_tutorial) C:\Users\WJ>_

```

5 cv_tutorial 활성화

2.3 가상환경 비활성화

```
$ conda deactivate
```

```

(cv_tutorial) C:\Users\WJ>conda deactivate
(base) C:\Users\WJ>_

```

3 📌 OpenCV 설치

가상환경 진입 후 설치 진행

```
$ pip install opencv-python
```

```
(cv_tutorial) C:\Users\WJ>python
Python 3.9.16 (main, Mar  8 2023, 10:39:24) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> import cv2
>>> _
```

6 openCV 설치 성공

4 Jupyter Notebook 설치

```
$ pip install jupyter notebook
```

```
(cv_tutorial) C:\Users\WJ>pip install jupyter notebook
Collecting jupyter
  Downloading jupyter-1.0.0-py2.py3-none-any.whl (2.7 kB)
Collecting notebook
  Downloading notebook-6.5.3-py3-none-any.whl (529 kB)
----- 529.7/529.7 kB 4.2 MB/s eta 0:00:00
Collecting nbconvert
  Downloading nbconvert-7.3.0-py3-none-any.whl (284 kB)
----- 284.0/284.0 kB 3.5 MB/s eta 0:00:00
Collecting qtconsole
  Downloading qtconsole-5.4.2-py3-none-any.whl (121 kB)
----- 121.2/121.2 kB 7.4 MB/s eta 0:00:00
Collecting jupyter-console
  Downloading jupyter_console-6.6.3-py3-none-any.whl (24 kB)
Collecting ipykernel
  Downloading ipykernel-6.22.0-py3-none-any.whl (149 kB)
----- 150.0/150.0 kB 4.5 MB/s eta 0:00:00
Collecting ipywidgets
  Downloading ipywidgets-8.0.6-py3-none-any.whl (138 kB)
----- 138.3/138.3 kB 4.0 MB/s eta 0:00:00
Collecting prometheus-client
  Downloading prometheus_client-0.16.0-py3-none-any.whl (122 kB)
----- 122.5/122.5 kB 3.5 MB/s eta 0:00:00
Collecting pyzmq>=17
  Downloading pyzmq-25.0.2-cp39-cp39-win_amd64.whl (1.1 MB)
----- 1.1/1.1 MB 3.4 MB/s eta 0:00:00
Collecting tornado>=6.1
  Downloading tornado-6.2-cp37-abi3-win_amd64.whl (425 kB)
----- 425.3/425.3 kB 3.3 MB/s eta 0:00:00
Collecting ipython-genutils
  Downloading ipython_genutils-0.2.0-py2.py3-none-any.whl (26 kB)
Collecting terminado>=0.8.3
  Downloading terminado-0.17.1-py3-none-any.whl (17 kB)
Collecting jupyter-client>=5.3.4
  Downloading jupyter_client-8.1.0-py3-none-any.whl (102 kB)
----- 102.9/102.9 kB 2.0 MB/s eta 0:00:00
```

7 설치 화면

4.1 가상환경에 커널 연결

```
$ python -m ipykernel install --user --name <venv_name> --display-name
<kernel_name>
```

'--display-name <kernel_name>'은 생략 가능

```
(cv_tutorial) C:\Users\WJ>python -m ipykernel install --user --name cv_tutorial
Installed kernelspec cv_tutorial in C:\Users\WJ\AppData\Roaming\jupyter\kernels\cv_tutorial
```

4.2 주피터 노트북 실행

```
$ jupyter notebook
```

```
(cv_tutorial) C:\Users\#LWJ>jupyter notebook
[I 13:10:12.963 NotebookApp] Writing notebook server cookie secret to C:\Users\#LWJ\AppData\Roaming\jupyter\runtime\notebook_cookie_secret

Read the migration plan to Notebook 7 to learn about the new features and the actions to take if you are using extensions.
https://jupyter-notebook.readthedocs.io/en/latest/migrate_to_notebook7.html

Please note that updating to Notebook 7 might break some of your extensions.

[I 13:10:13.677 NotebookApp] Serving notebooks from local directory: C:\Users\#LWJ
[I 13:10:13.677 NotebookApp] Jupyter Notebook 6.5.3 is running at:
[I 13:10:13.678 NotebookApp] http://localhost:8888/?token=f346cd27480be45ba189da8a3166cf9c40fccaa7e3011b41
[I 13:10:13.678 NotebookApp] or http://127.0.0.1:8888/?token=f346cd27480be45ba189da8a3166cf9c40fccaa7e3011b41
[I 13:10:13.679 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 13:10:13.728 NotebookApp]

To access the notebook, open this file in a browser:
file:///C:/Users/LWJ/AppData/Roaming/jupyter/runtime/nbserver-11292-open.html
Or copy and paste one of these URLs:
http://localhost:8888/?token=f346cd27480be45ba189da8a3166cf9c40fccaa7e3011b41
or http://127.0.0.1:8888/?token=f346cd27480be45ba189da8a3166cf9c40fccaa7e3011b41
[I 13:16:53.728 NotebookApp] Interrupted...
[I 13:16:53.729 NotebookApp] Shutting down 0 kernels
[I 13:16:53.730 NotebookApp] Shutting down 0 terminals
```

8 실행시 터미널



Jupyter

Quit Logout

Files Running Clusters

Select items to perform actions on them.

Upload New ↻

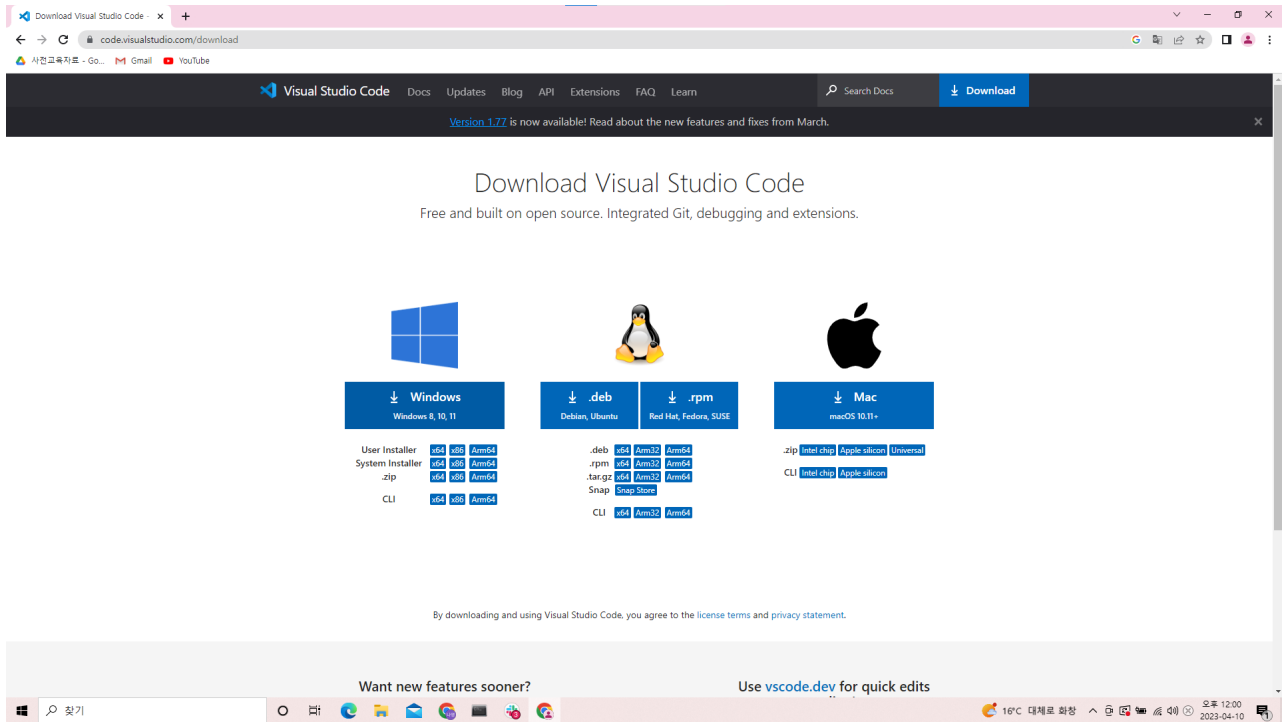
<input type="checkbox"/> 0	Name	Last Modified	File size
<input type="checkbox"/>	3D Objects	2년 전	
<input type="checkbox"/>	anaconda3	39분 전	
<input type="checkbox"/>	Contacts	2년 전	
<input type="checkbox"/>	Desktop	10시간 전	
<input type="checkbox"/>	Documents	39분 전	
<input type="checkbox"/>	Downloads	10시간 전	
<input type="checkbox"/>	Favorites	2년 전	
<input type="checkbox"/>	Links	2년 전	
<input type="checkbox"/>	Music	2년 전	
<input type="checkbox"/>	OneDrive	2년 전	
<input type="checkbox"/>	Pictures	11분 전	
<input type="checkbox"/>	PycharmProjects	10달 전	
<input type="checkbox"/>	Saved Games	2년 전	
<input type="checkbox"/>	Searches	2년 전	
<input type="checkbox"/>	Videos	2년 전	

9 실행 결과

5 📌 Visual Studio Code

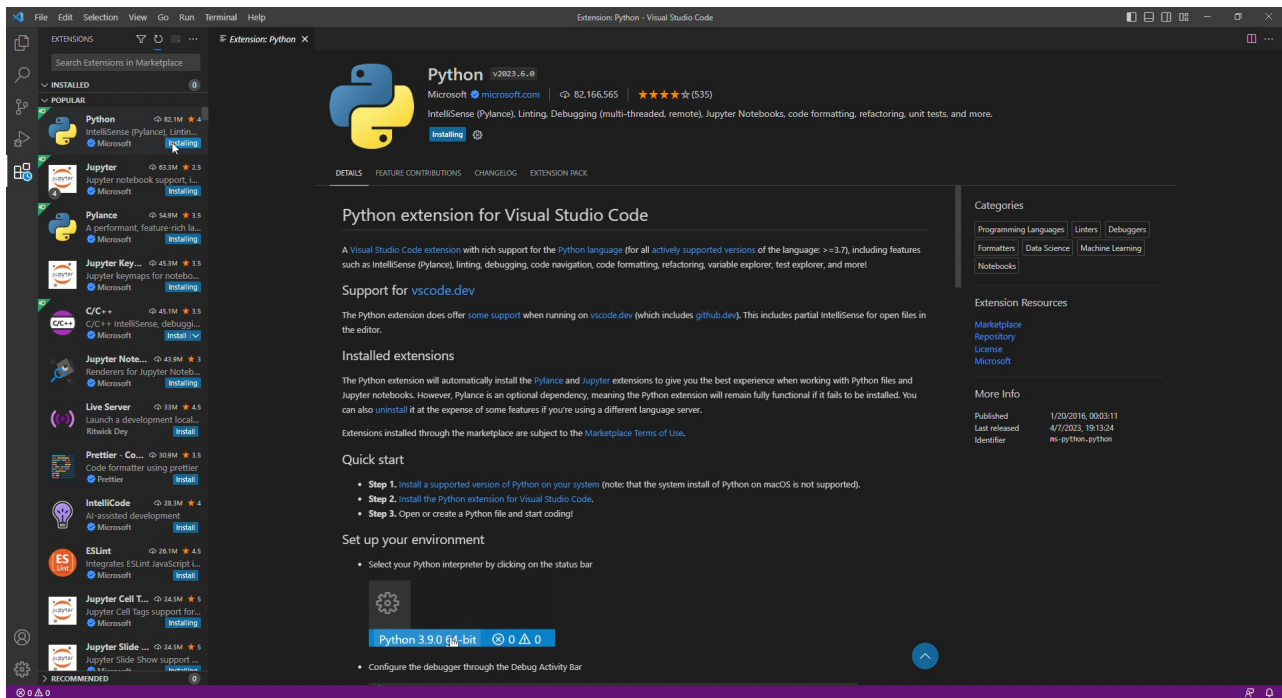
5.1 VScode 설치

<https://code.visualstudio.com/download>



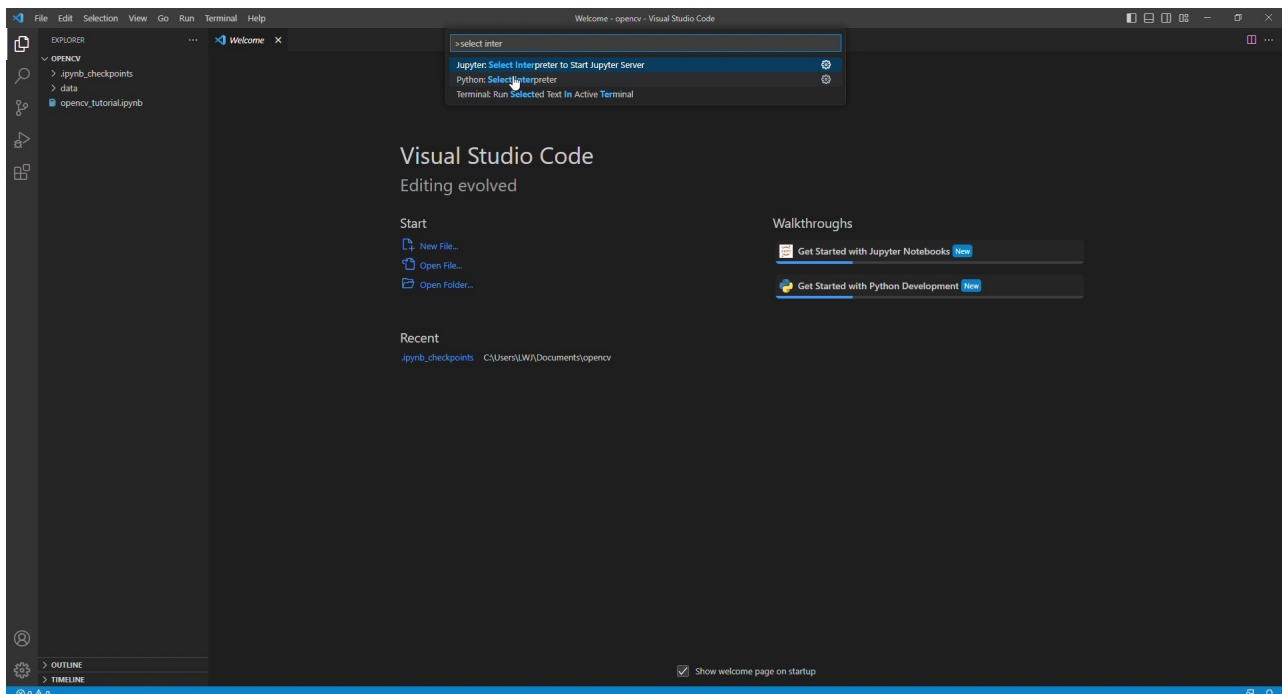
5.2 VScode에서 파이썬 사용

- extension에서 'Python' 검색 후 설치

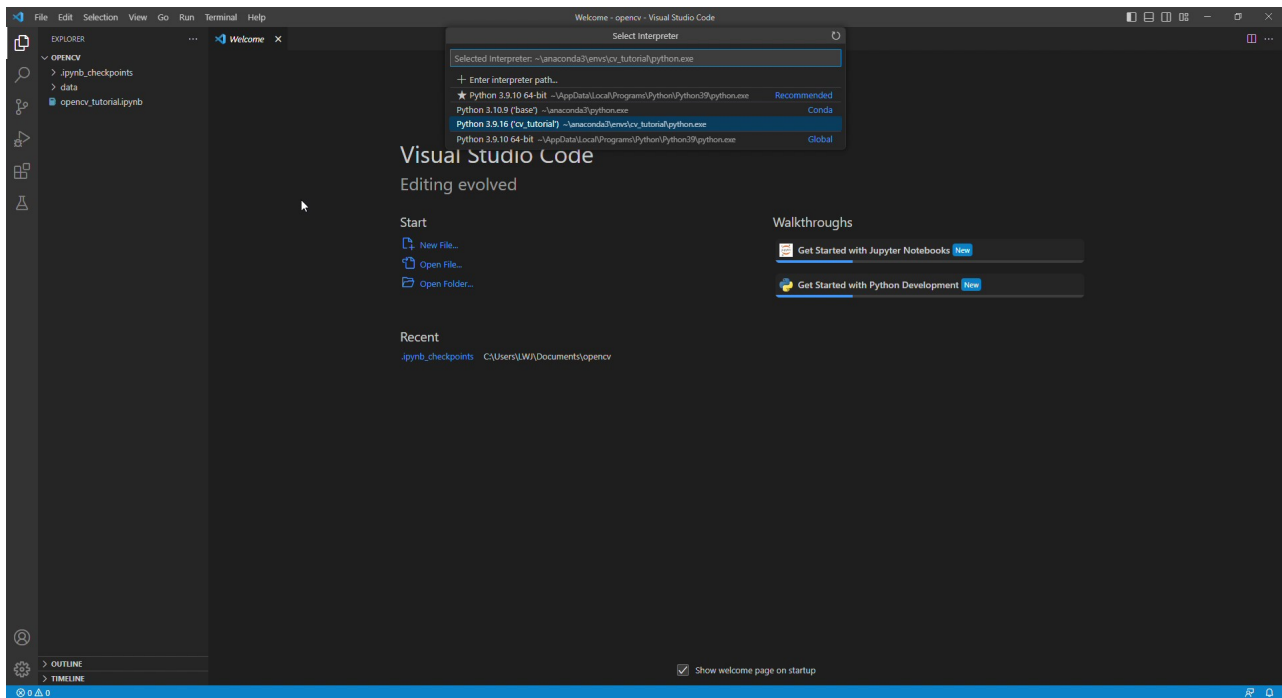


5.3 VScode에서 conda 가상환경 설정

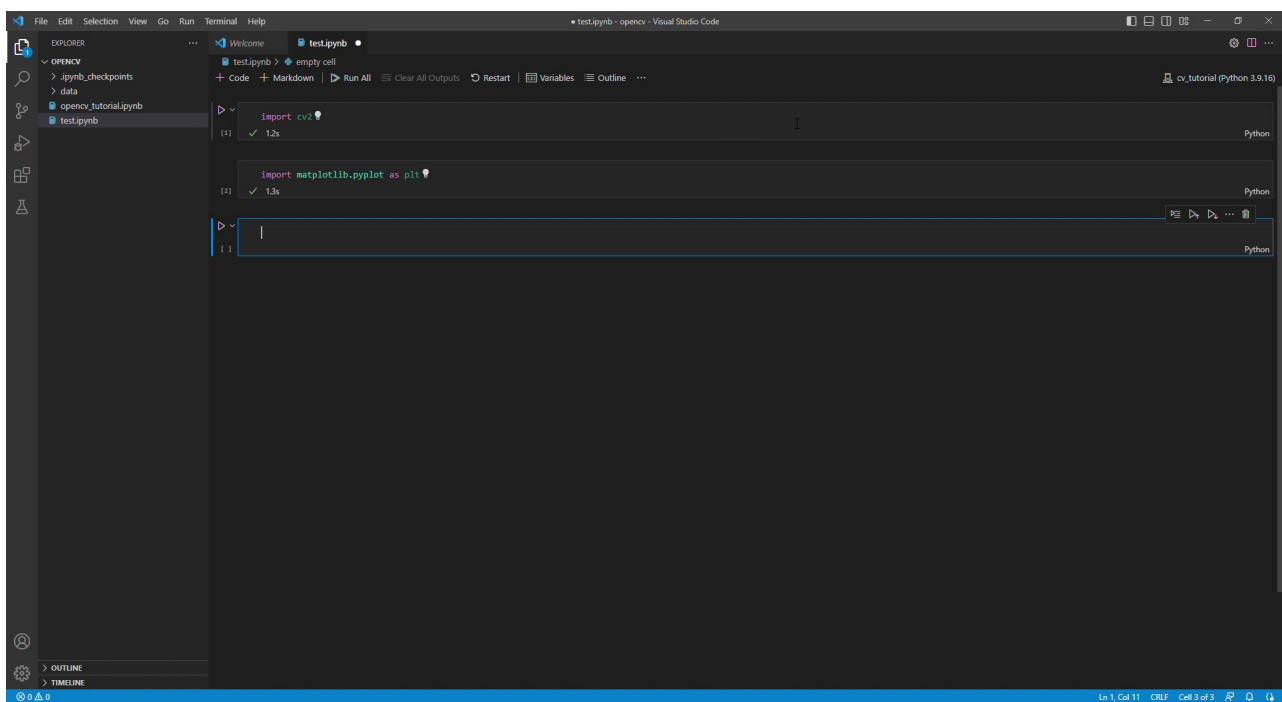
- Ctrl + Shift + P 입력 > Python: Select Interpreter 선택 > 만들어준 가상환경 선택 (e.g. cv_tutorial)
- 파이썬 인터프리터 선택이란 어떤 경로의 파이썬을 실행시킬지 선택하는 것



10 Python: Select Interpreter 선택



11 가상환경 경로 선택



12 해당 가상환경에 설치한 라이브러리 불러와 확인