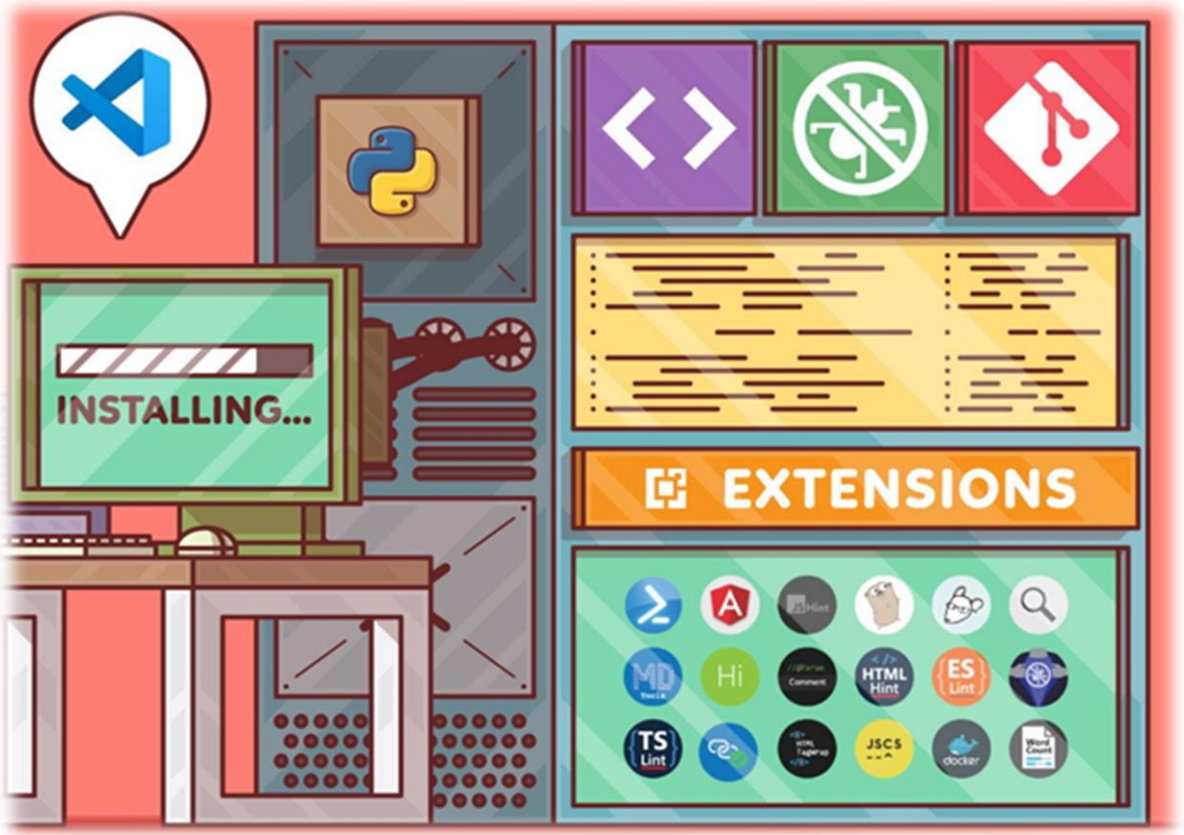
3. 개발환경



박경규

개발환경

코드 에디터

Visual Studio Code

Sublime Text

PC

python™

ANACONDA
Powered by Continuum Analytics®

Jupyter Notebook

Jupyter Lab

웹

colab

https://colab.research.google.com/

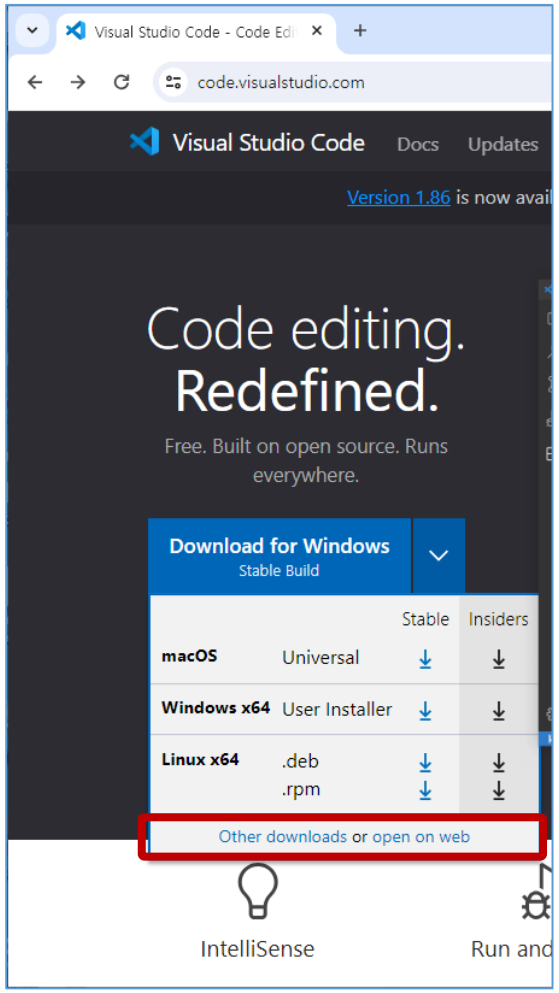
kaggle

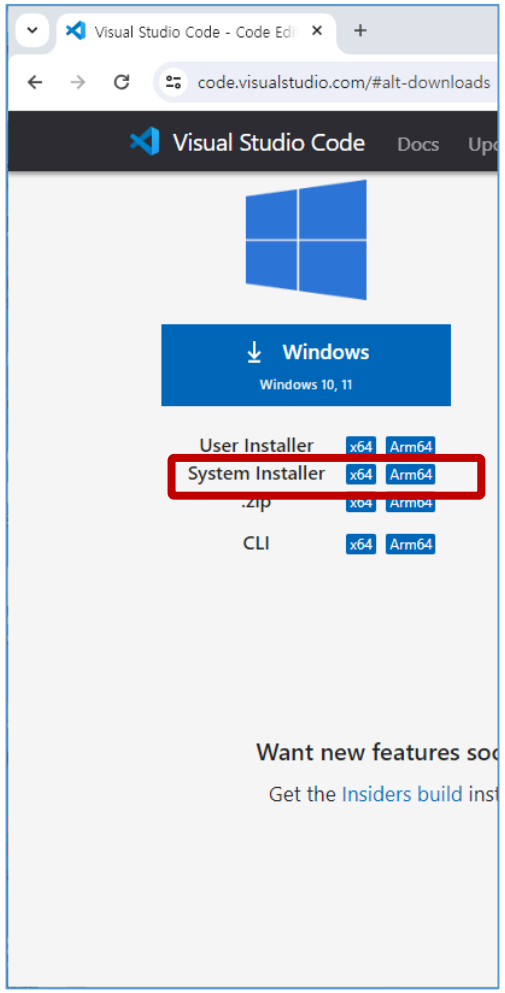
https://www.kaggle.com/

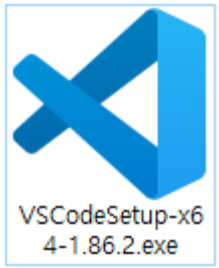
VS Code 설치

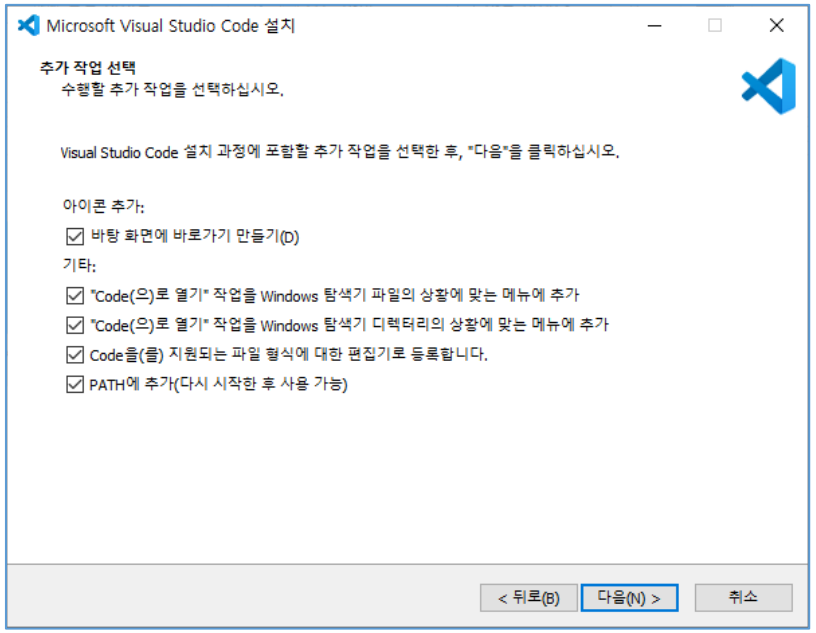
■ 설치 프로그램

https://code.visualstudio.com/



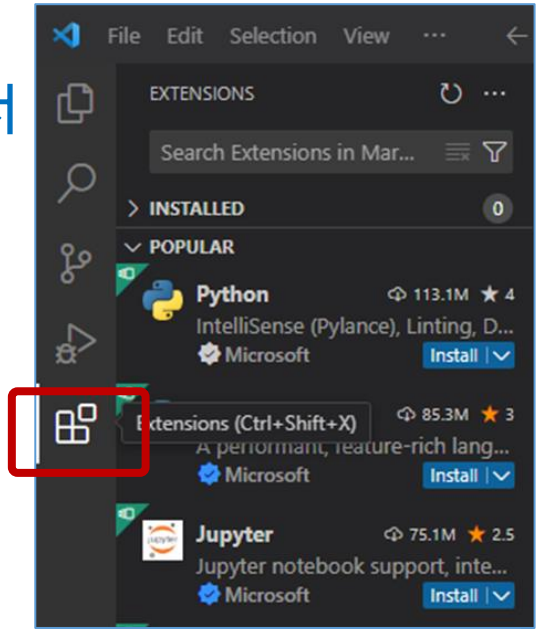






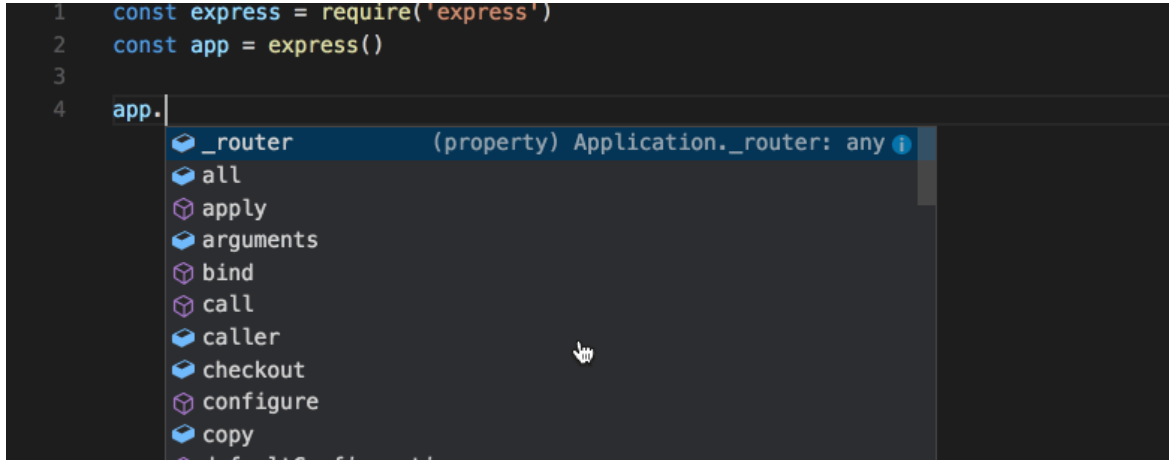
■ VS Code 프로그램에서 Extension 설치

Python
Jupyter
Black Formatter
VSCode Icons
REST Client



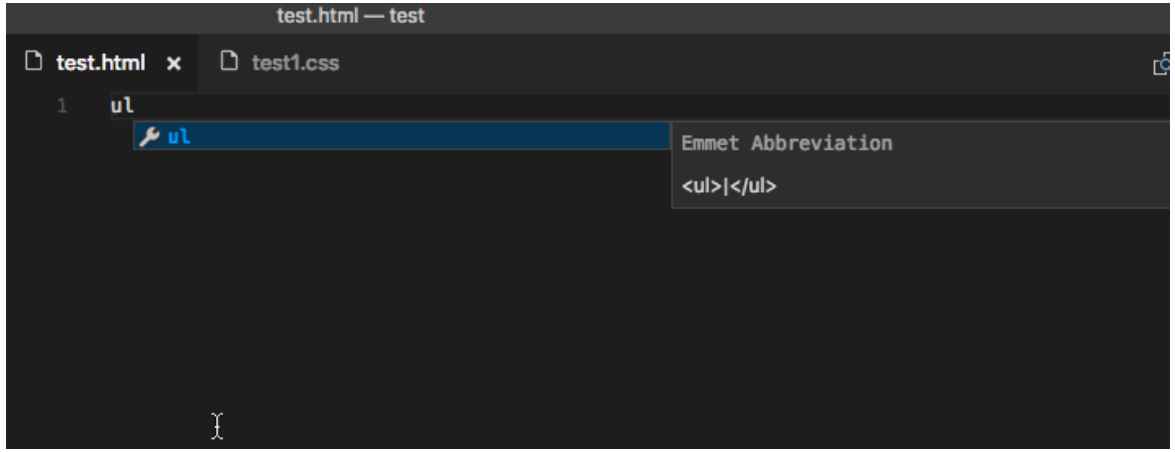
VS Code 단축키

IntelliSense : Ctrl + Shift



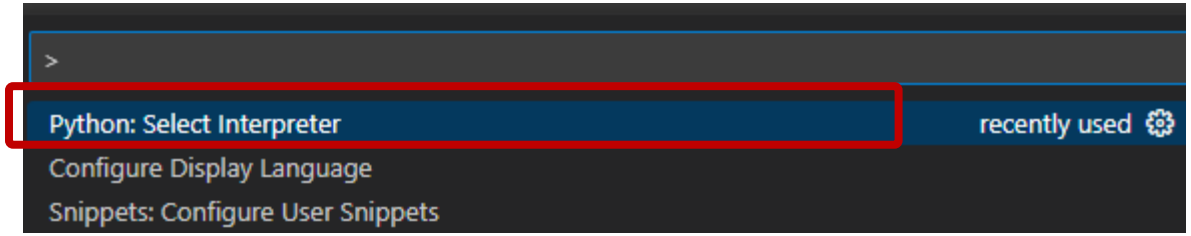
https://code.visualstudio.com/docs/editor/intellisense

Emmet Abbreation : Ctrl + Space



https://code.visualstudio.com/docs/editor/emmet

Command Pallate : Ctrl + Shift+ P



파일 찾기 : Ctrl + P

행 삭제 : ctrl+X

행 복사 : ctrl+C

위에 행 복사 추가 : shift+alt+Down

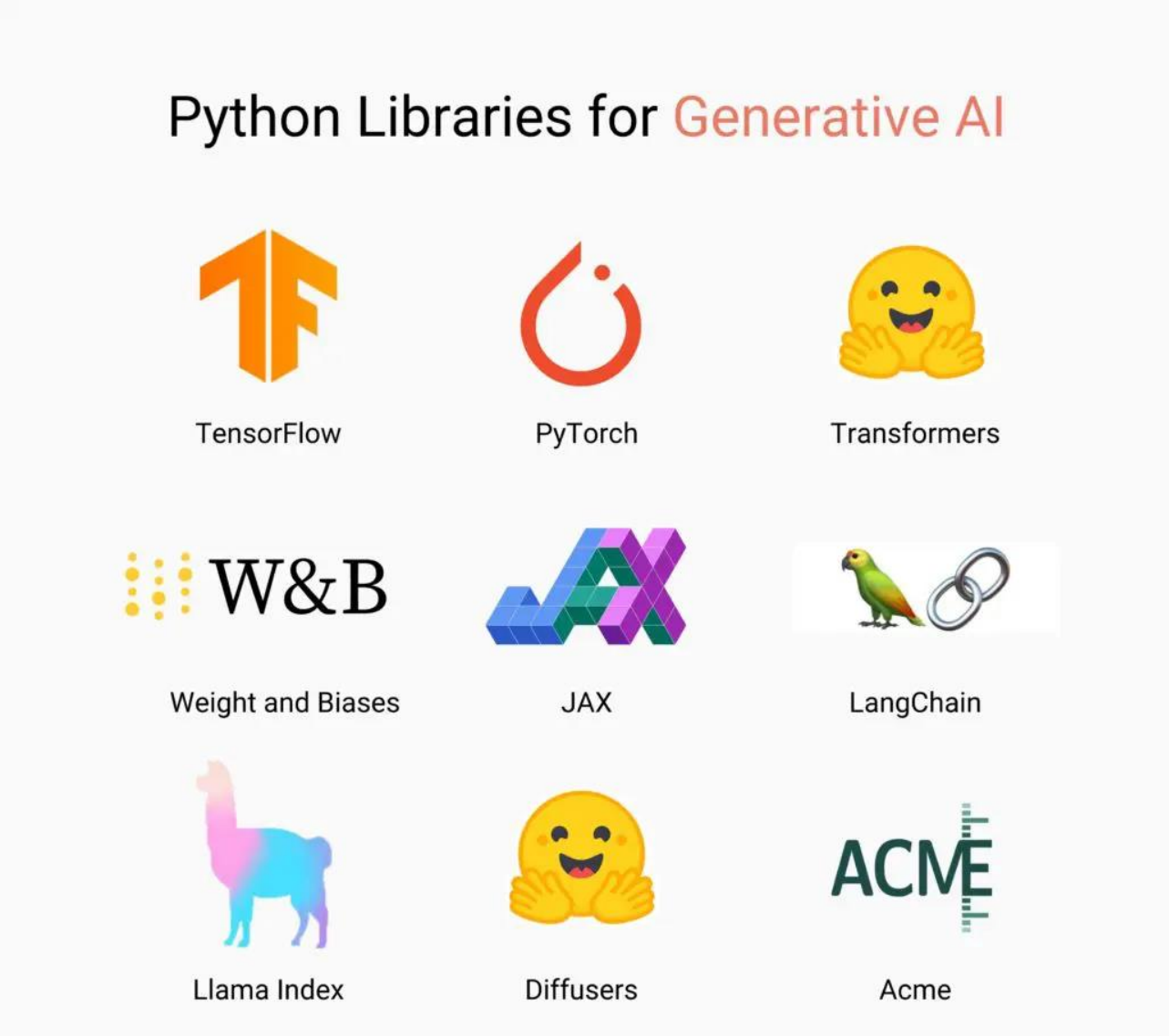
아래에 행 복사 추가 : shift+alt+Up

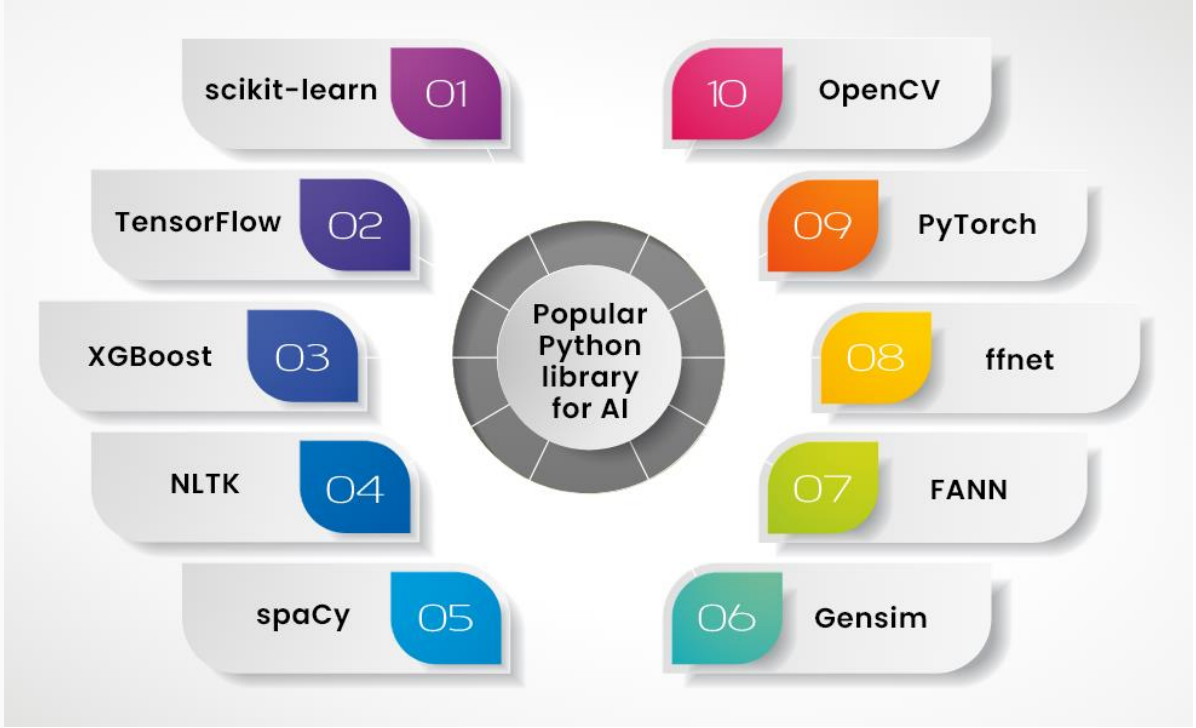
행을 아래로 이동 : alt+Down

행을 위로 이동 : alt+Up

멀티 Cursor : Alt + Mouse click

Python(파이썬)





https://datasciencedojo.com/blog/python-libraries-for-generative-ai/

Python 설치

■ 파이썬 다운로드

https://www.python.org/downloads/windows/

Stable Releases

•Python 3.11.8 - Feb. 6, 2024

•Note that Python 3.11.8 *cannot* be used on Windows 7 or earlier.

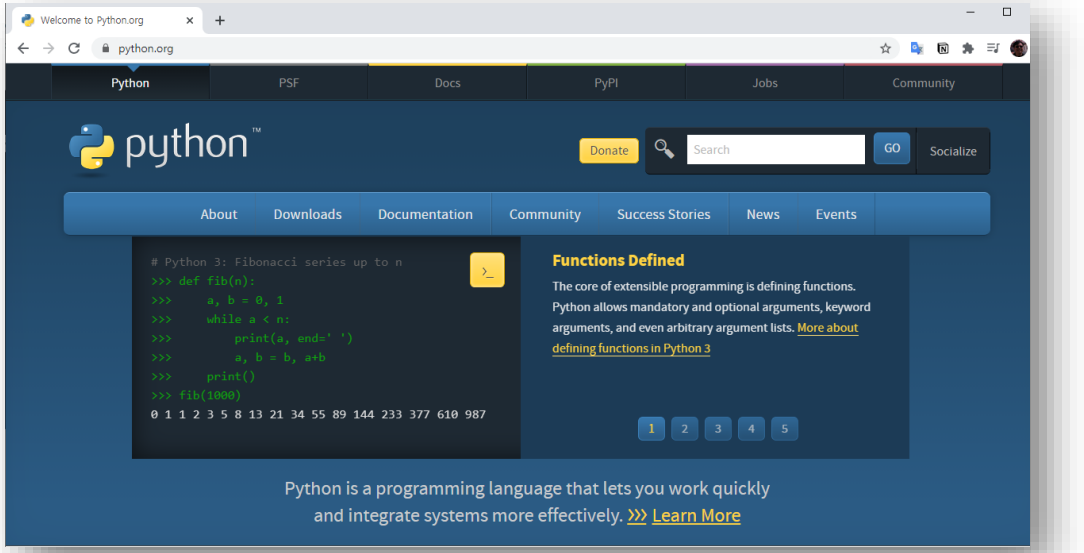
- Download Windows embeddable package (32-bit)
- Download Windows embeddable package (64-bit)
- Download Windows embeddable package (ARM64)
- Download Windows installer (32 -bit)
- Download Windows installer (64-bit)
- Download Windows installer (ARM64)

https://www.python.org/downloads/macos/

Stable Releases

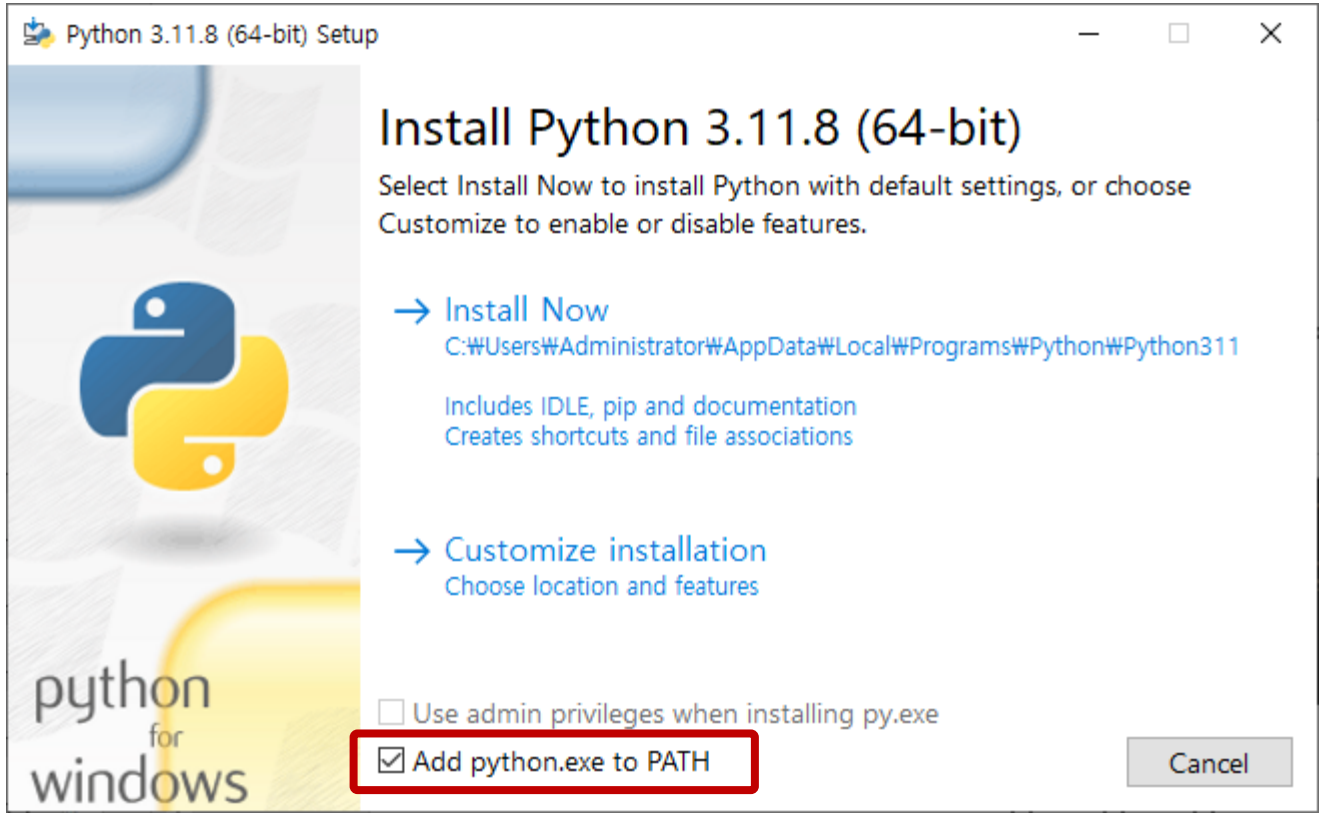
•Python 3.11.8 - Feb. 6, 2024

- Download macOS 64-bit universal2 installer



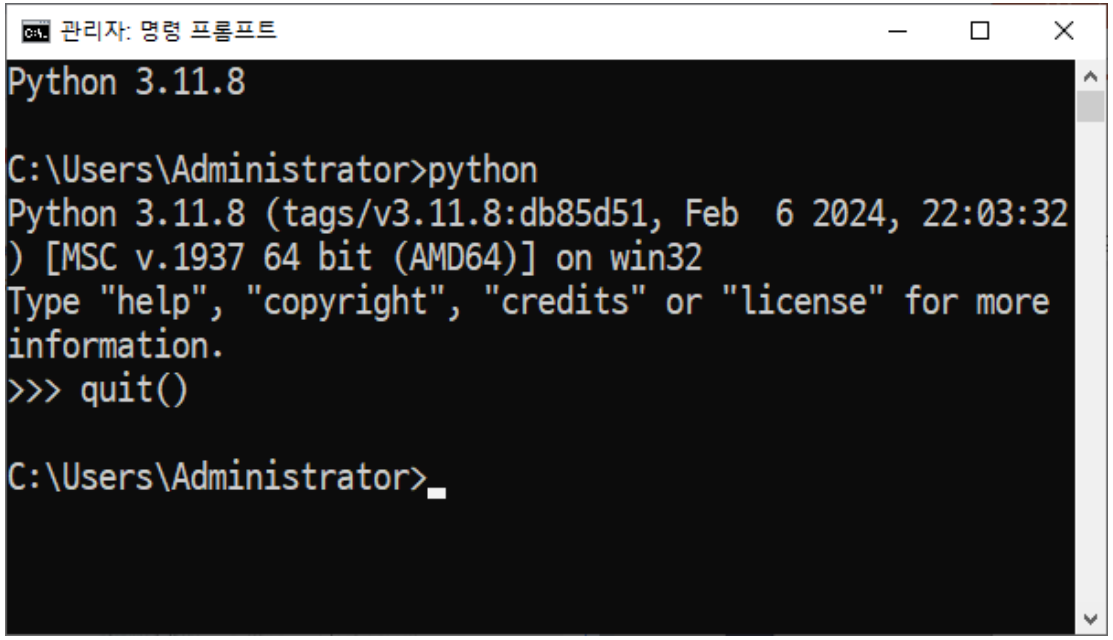
파이썬 설치

■ 파이썬 설치



■ 파이썬 실행

- 버전 확인 : python --version
- 실행 : python
- 종료 : quit()



파이썬 가상환경 설치

프로젝트별로 독립된 파이썬 실행 환경을 사용할 수 있는 가상 환경(Virtual Environment) 구성을 권장합니다.

- 가상환경 생성 : `python -m venv py311`

- 가상환경 실행
  - Windows : `py311\Scripts\activate.bat`
  - Linux / macOS : `source py311/bin/activate`

- 파이썬 패키지 설치 : `pip install jupyterlab notebook openai`
  - Jupyter Lab 설치 확인 : `jupyter lab`
  - Jupyter Notebook 설치 확인 : `jupyter notebook`

- 패키지 목록파일 만들기
  ```
  pip freeze > requirements.txt
  ```

- 패키지 목록파일로 패키지 설치 하는 방법
  ```
  pip install -r requirements.txt
  ```

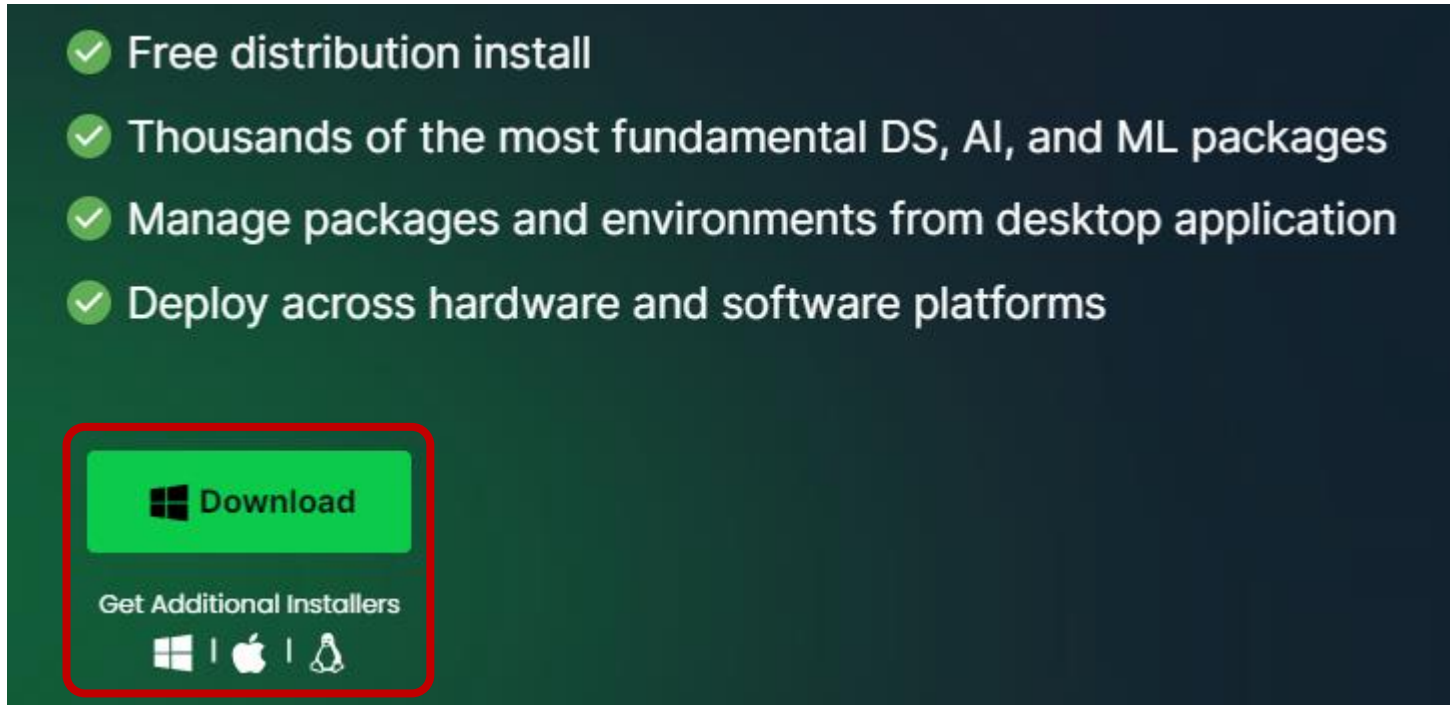
- 파이썬 패키지 삭제 : `pip install jupyterlab notebook openai`

Anaconda (아나콘다)

Anaconda는 파이썬 기본 프로그램과 많이 사용하는 패키지 그리고, 통합 개발환경을 포함한 배포판입니다.

■ Anaconda 설치/실행

https://www.anaconda.com/download/



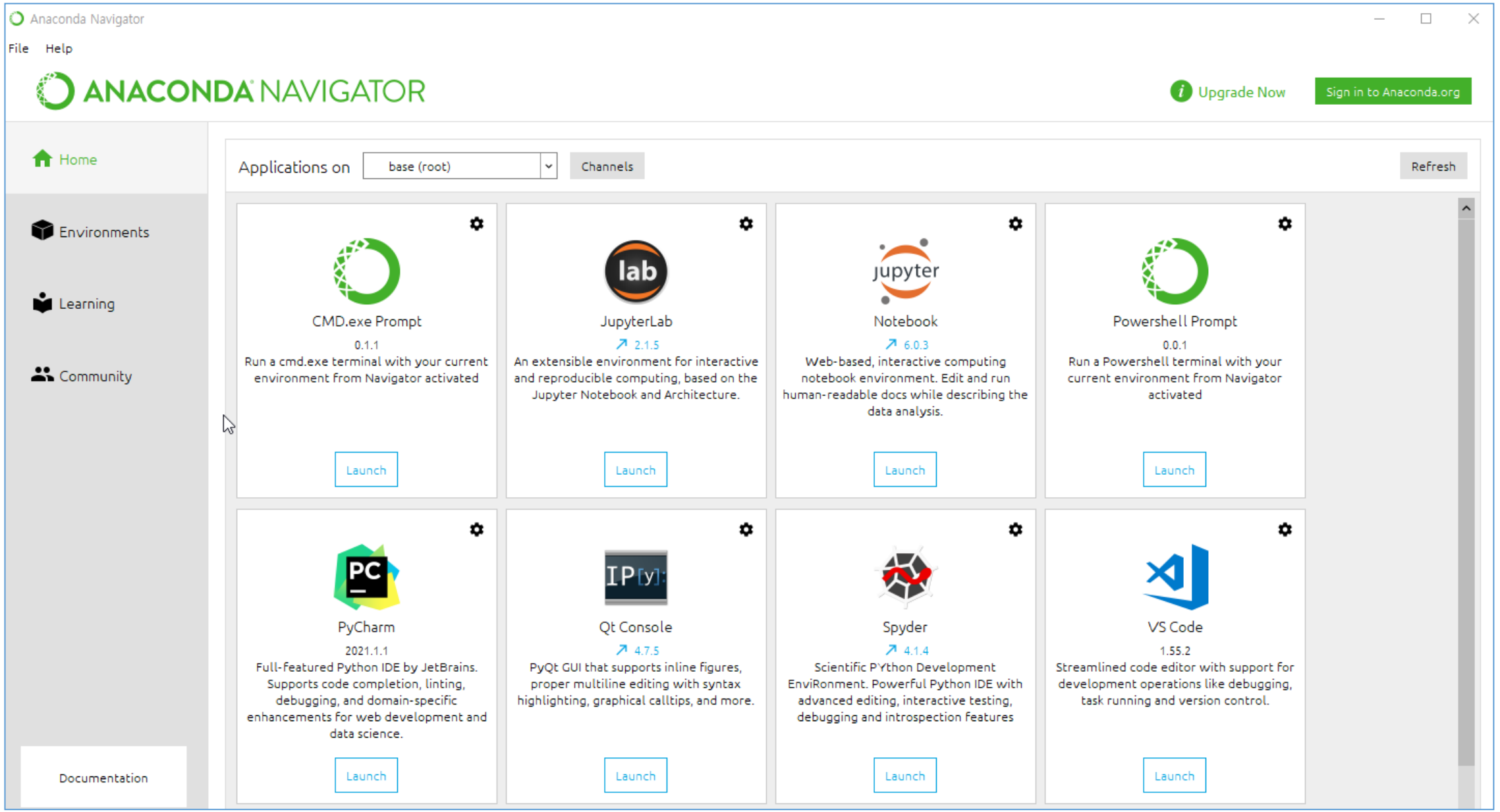
■ 실행

- 윈도우 시작메뉴
  - → Anaconda3
  - → Anaconda Prompt
  - → python

■ 가상환경

- conda create --name myenv
- conda activate myenv

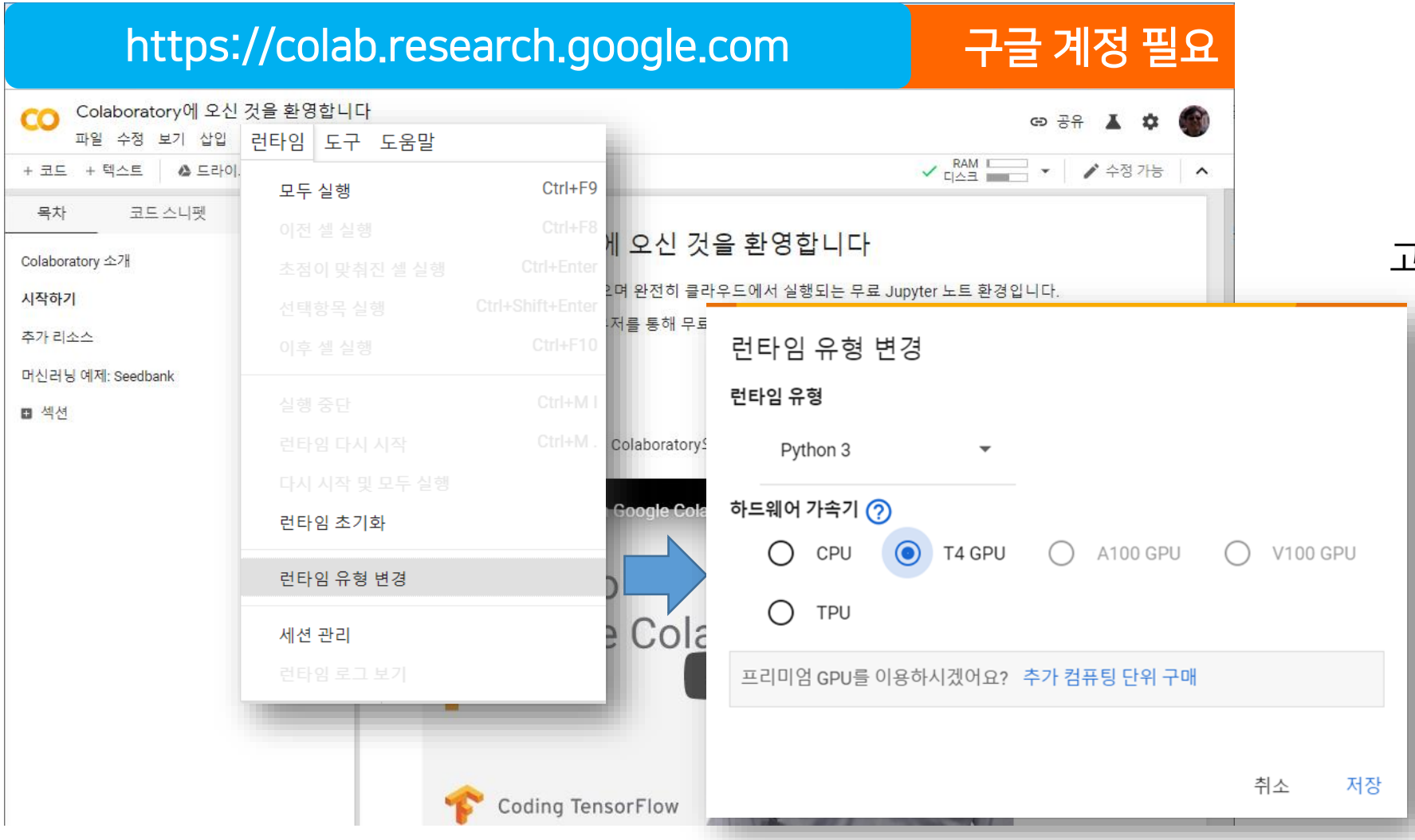
Anaconda (아나콘다)



Colab(코랩)

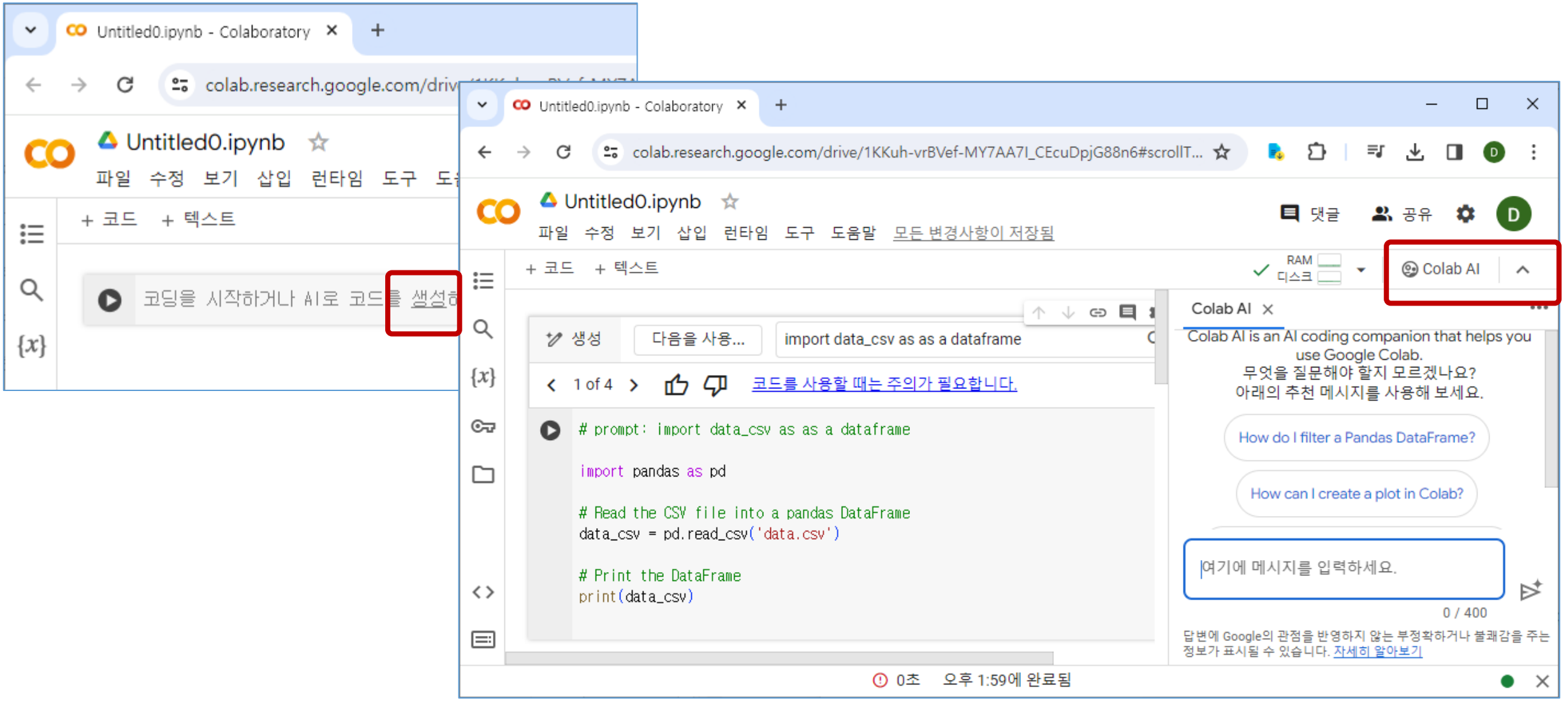
개발툴 설치없이 웹상에서 파이썬 프로그램을 할수 있는 환경으로 딥러닝에 필요한 GPU를 사용할 수 있습니다.

https://colab.research.google.com 구글 계정 필요



고성능GPU(Graphics Processing Unit)

Colab – AI Powered Coding



■ 참고 : https://blog.google/technology/developers/google-colab-ai-coding-features/

Python 기초

■ 변수 할당(Variable Assignment)

```
x = 2
y = 3
z = x + y

x = 'hello'
x = "hello"
X
[Out] 'hello'
```

Single Quotation
작은 따옴표

Double
Quotation
쌍 따옴표

■ 출력

```
print(x)
[Out] 'hello'
```

■ 리스트(List)

```
[1, 2, 3]
['a', 'b', 'c']
my_list = [1, 2, 'apple', True]
my_list.append(100)
my_list[0]
my_list[:-1]
my_list[-1]
```

Bracket
대괄호

■ 딕셔너리(Dictionary)

```
d = {'key1':'item1','key2':'item2'}
d['key1']
[Out] 'item1'
```

Brace
중괄호

실습

python_essence.ipynb

Thank you

kgpark88@gmail.com