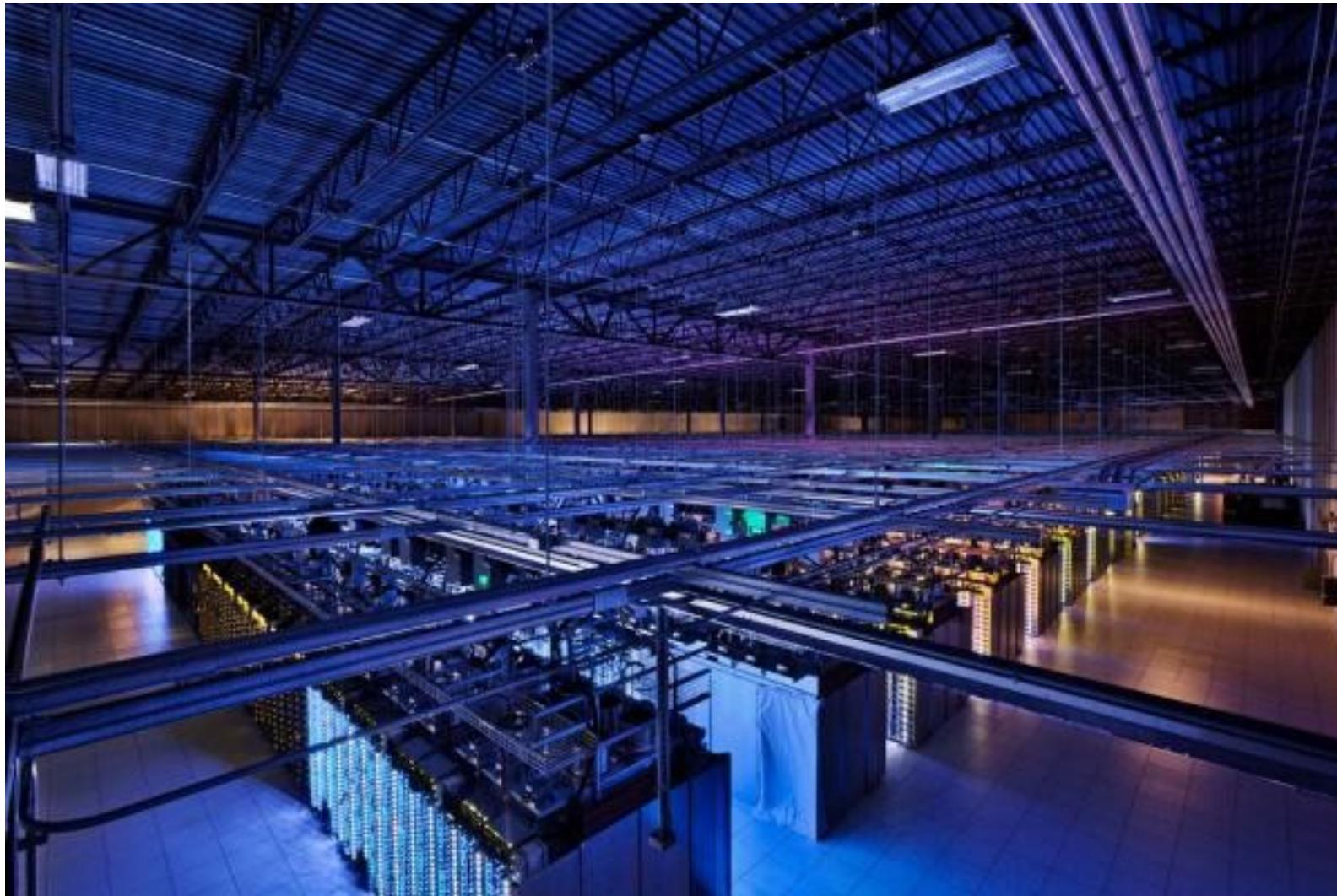


실습을 통해 기초부터 배우는 머신러닝

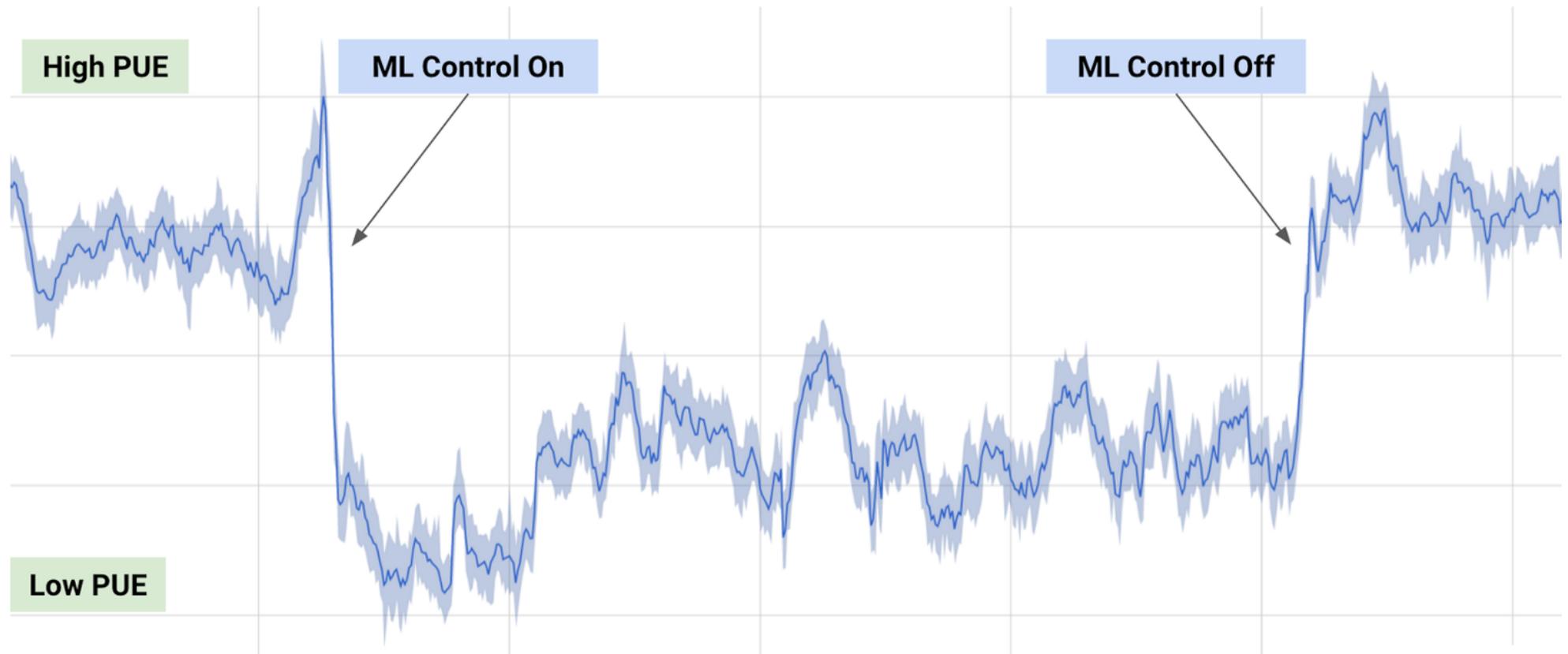
18.12.01 – 18.12.29 (토 , 13:00 ~ 18:00)



Introduction



Introduction



This lecture is

- Python 을 사용해 데이터를 분석할 수 있는 라이브러리를 배울 수 있습니다 .
- 머신러닝에 대한 주요 개념들과 실제 학습 알고리즘을 통해 프로그램을 구현하는 방법을 배웁니다 .
- 최종적으로 프로젝트를 진행하여 실제 데이터에 대해 배운 내용을 적용해볼 수 있습니다 .

Time schedule

주차 별 강의 내용				
1 주	2 주	3 주	4 주	5 주
Why python? Python Env Python basic	Numpy Pandas Matplotlib	Machine Learning (What's learning algorithms?) Linear regression Logistic regression	SVM Decision Tree PCA K-means	Project (Competition & Portfolio)

Week 1



Agenda

- Why python?
- Installation of python(Anaconda)
- Python basic
- Practice

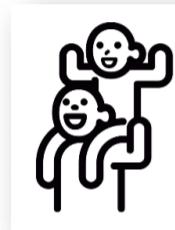
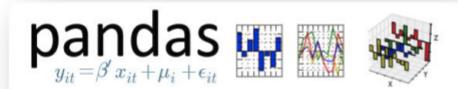


“Life is short, You need Python.”

인생은 짧다 , 당신은 파이썬이 필요하다 .

Why python?

1. 많은 라이브러리와 프레임워크를 사용할 수 있다



Why python?

2. 활용도가 높다



Why python?

3. 인기가 많다 (참고 자료 & 강력한 커뮤니티)

The image displays two side-by-side screenshots illustrating the popularity and strong community of Python.

Left Screenshot: Stack Overflow Post

A screenshot of a Stack Overflow post titled "Print multiple arguments in Python". The post contains code snippets and discussions. One snippet shows a print statement with multiple arguments. Another snippet shows a tuple being passed to a function. The post has 11 answers and 410 comments.

Right Screenshot: Python.org and GitHub

The Python.org homepage features the Python logo and navigation links for About, Downloads, Documentation, Community, Success Stories, News, and Events. Below the homepage is a GitHub search results page for "python". The results include:

- python/cpython**: The Python programming language. Last updated 2 hours ago. Python license. 21k stars.
- python/pythondotorg**: Source code for python.org. Apache-2.0 license. Updated 12 days ago. Python license. 806 stars.
- python/peps**: Python Enhancement Proposals. Python license. 1.4k stars.

Why python?



파이썬을 쓰는 회사

Google NETFLIX

kakao

YouTube

intel

SAP

NAVER

Dropbox

redhat.

COUPANG
Color Your Days

SK planet

NEXON

ebay

SK telecom

SSG

What Top Tier Companies Use Python?

Google Quora

facebook

NASA

Dropbox

reddit

YAHOO!

IBM

Microsoft

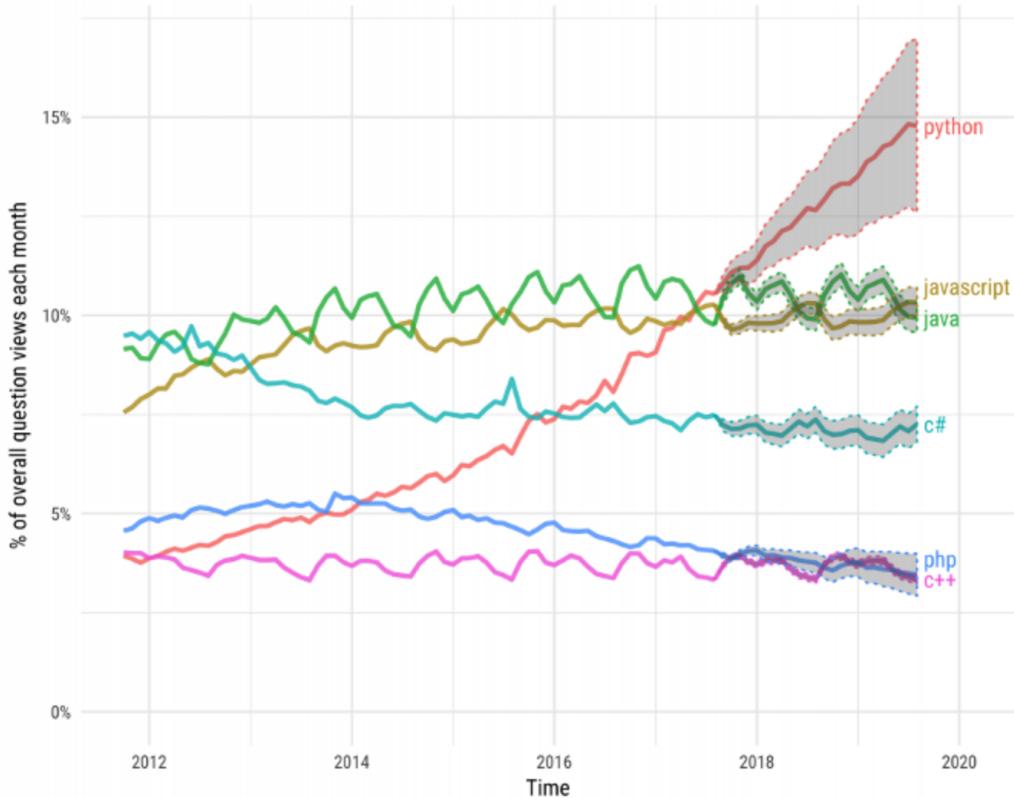
moz://a

Instagram

8293 Customers Use Python

Projections of future traffic for major programming languages

Future traffic is predicted with an STL model, along with an 80% prediction interval.



Why python?

일반 ▾

삼성전자, 대졸공채에 '파이썬' 도입..."오픈소스로 생태계 선점"



최종수정 2018.11.19 12:08 기사입력 2018.11.19 12:08

댓글 쓰기



뉴스듣기 >



가

가

[아시아경제 원다라 기자] 삼성전자 가 신입사원 대졸공채 전형에 오픈소스 기반 프로그래밍 언어 '파이썬'을 추가한 것으로 확인됐다.

19일 관련업계에 따르면 삼성전자, 삼성SDS 등 삼성 전자계열사들은 이번 하반기 대졸 직무적성검사(GSAT) 코딩 테스트 프로그래밍언어에 파이썬을 추가했다. 소프트웨어 개발직군은 GSAT에서 언어 · 수리 · 추리 영역 대신 코딩 테스트를 치르는데 기존에는 자바 · C++ · C 언어만 허용했다. 지난 주부터 진행된 면접전형에서는 비개발 직군인 경영 · 마케팅 직군 등의 지원자들에게도 파이썬을 할 수 있는지에 대한 질문이 공통적으로 주어진 것으로 알려졌다.

Why python?

4. 배우기 쉽다 (빠른 개발)

Java

```
public class HelloWorld {  
    public static void main(String[] args) {  
        System.out.println("Hello, world");  
    }  
}
```

Python

```
print("Hello, world")
```

It's that **SIMPLE!**

Anaconda

- 파이썬 및 머신 러닝 실행을 위한 도구
- 설치와 실행 및 환경 설정이 용이
- 다양한 패키지 포함



Jupyter notebook

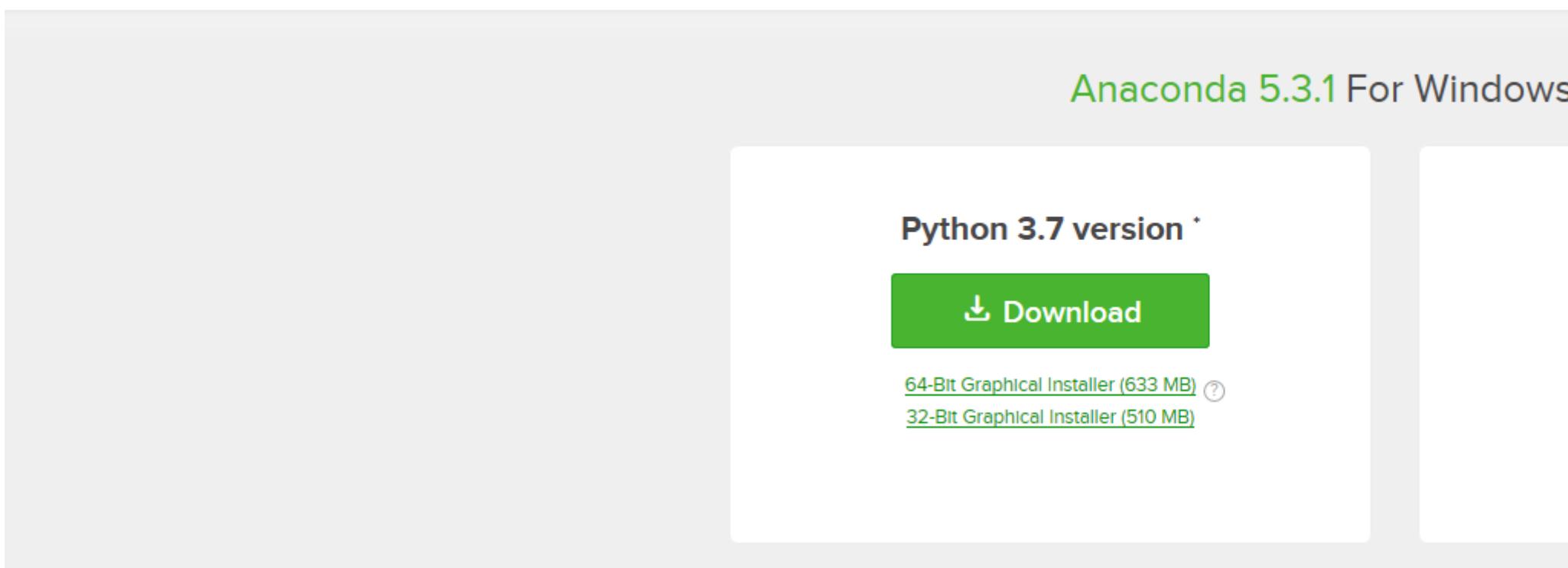
- 웹 브라우저에서 파이썬 코드를 작성 및 실행 가능

The screenshot shows a Jupyter Notebook interface with the following details:

- Toolbar:** Includes File, Edit, View, Insert, Cell, Kernel, Widgets, and Help menus.
- Tool Buttons:** Includes icons for file operations like Open, Save, New, and Run, along with a Code dropdown.
- In [3]:** `import cv2`
- In [4]:** `cv2.__version__`
- Out[4]:** '3.4.2'
- In [5]:** `import tensorflow`
- In [6]:** `tensorflow.__version__`
- Out[6]:** '1.5.0'
- In []:** An empty input cell.

Installation

- **<https://www.anaconda.com/download>**

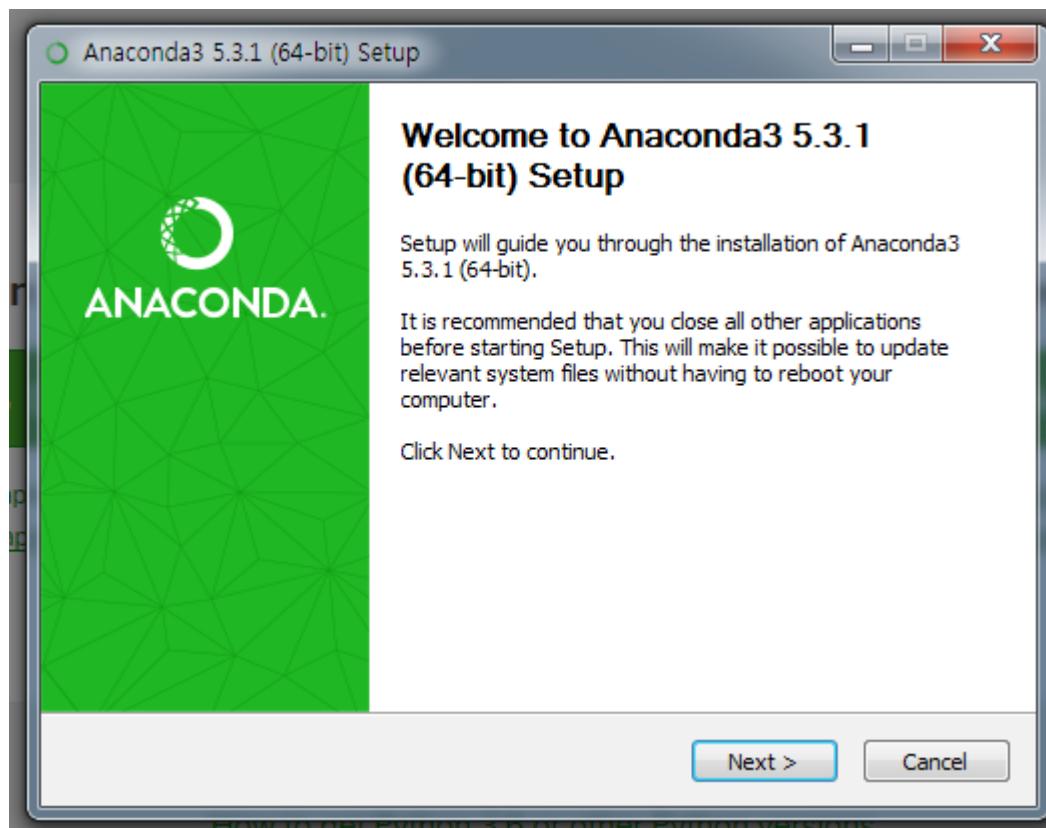


A screenshot of the Anaconda 5.3.1 For Windows download page. At the top right, it says "Anaconda 5.3.1 For Windows". Below that, there's a section for "Python 3.7 version *". A large green button with a white downward arrow and the text "Download" is centered. Underneath the button, there are two download links: "64-Bit Graphical Installer (633 MB)" and "32-Bit Graphical Installer (510 MB)".



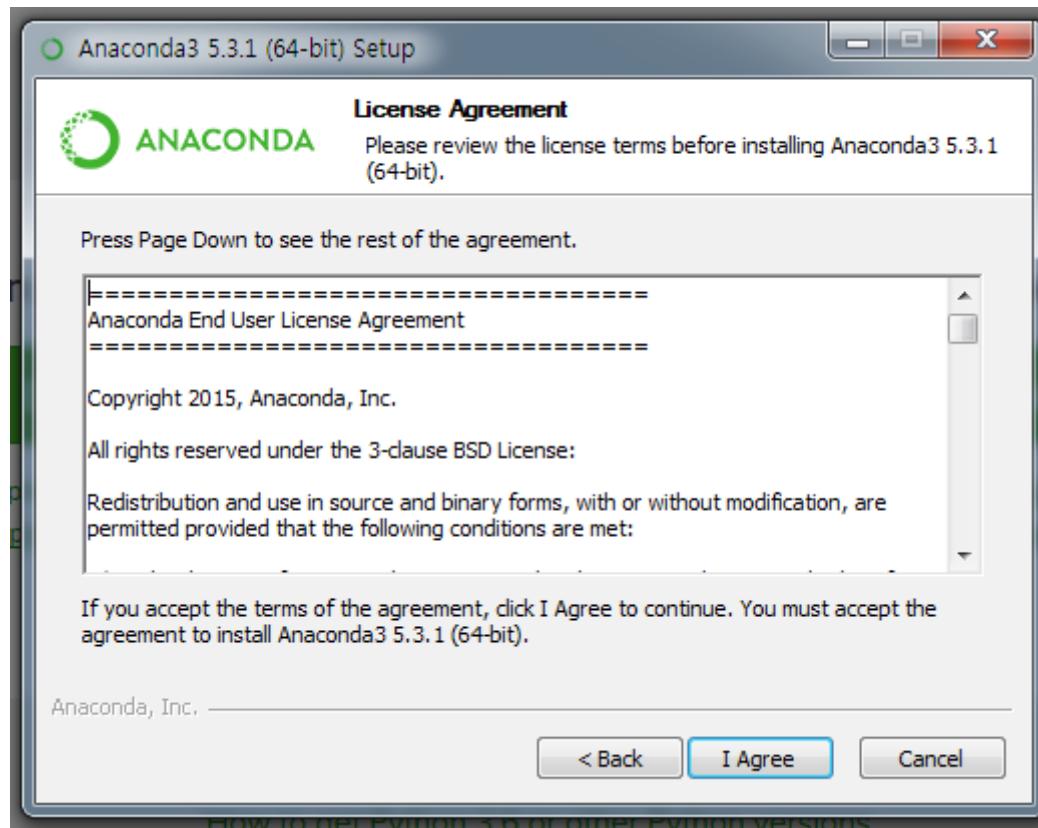
Installation

- Next



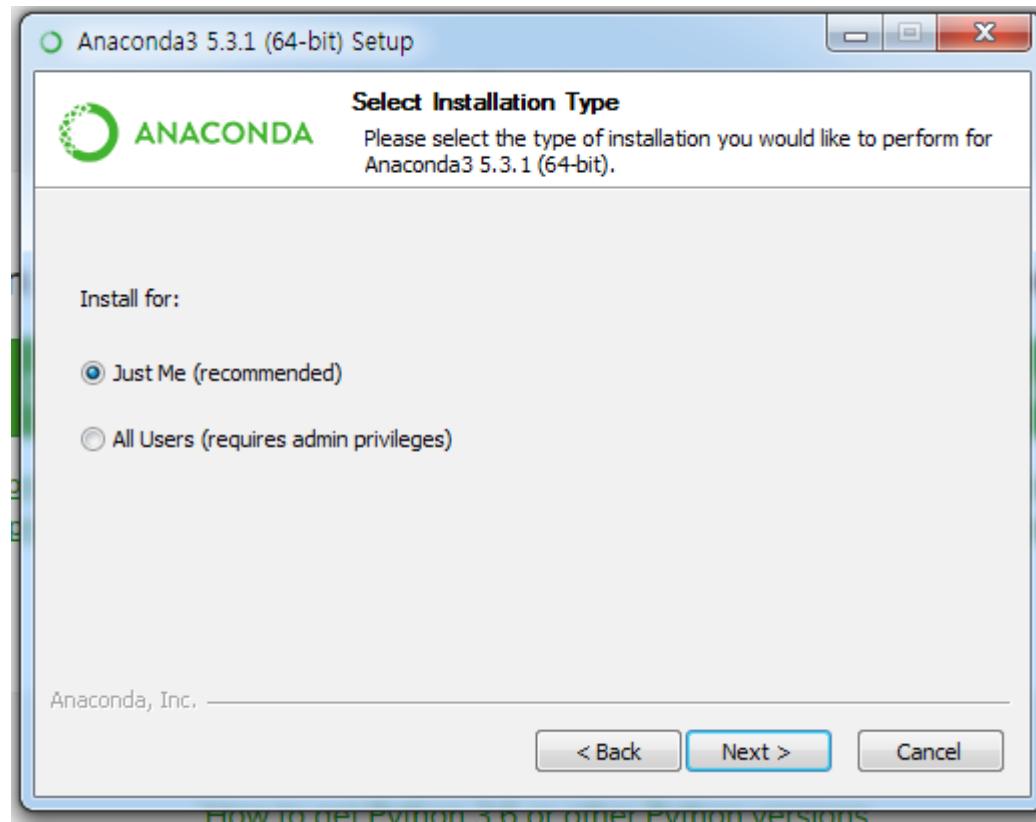
Installation

- I agree



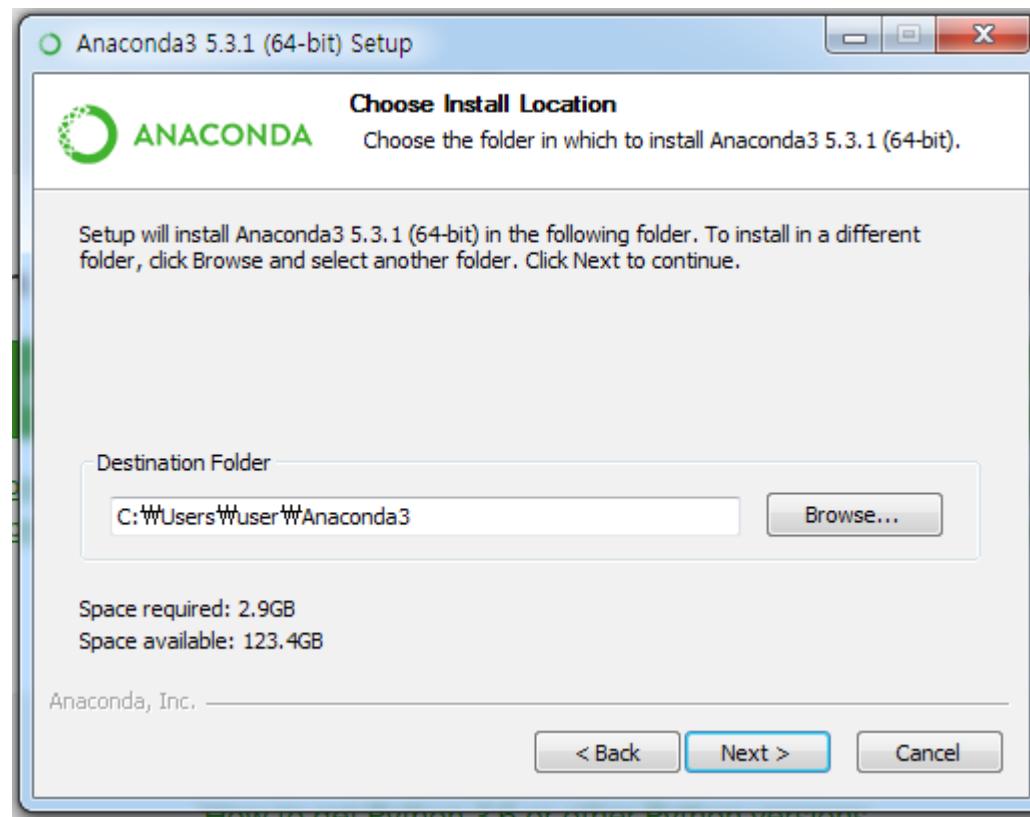
Installation

- Just Me (recommended)



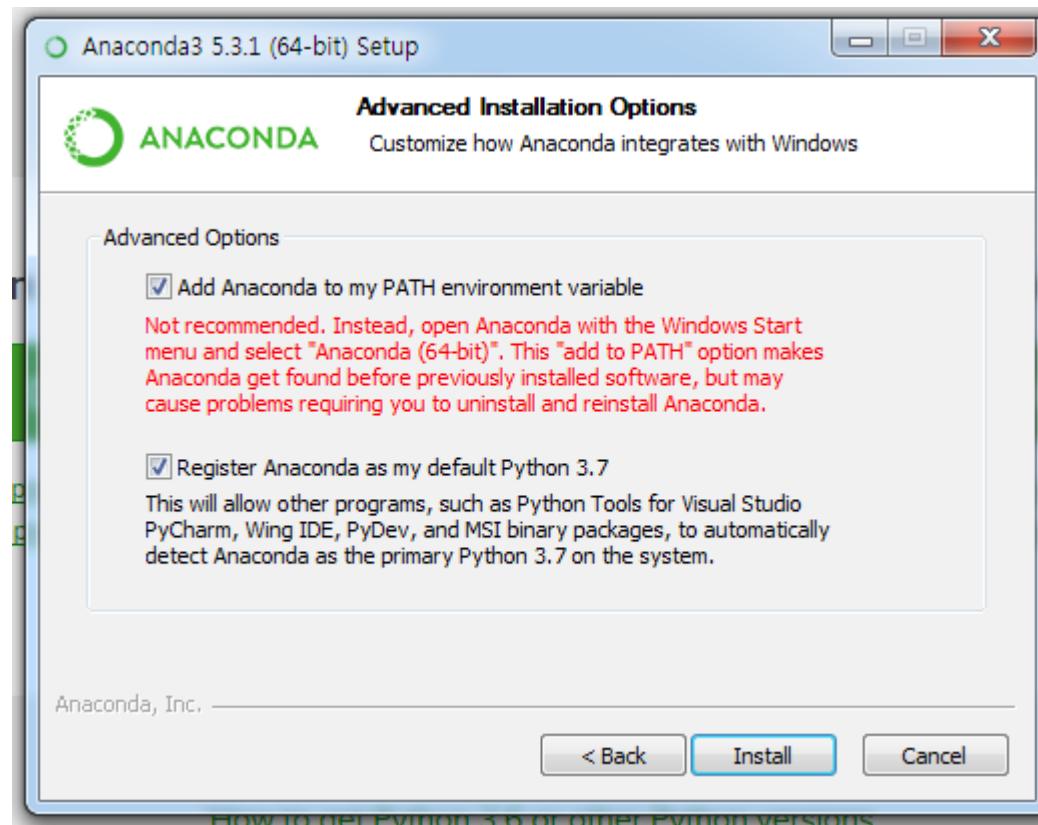
Installation

- Next



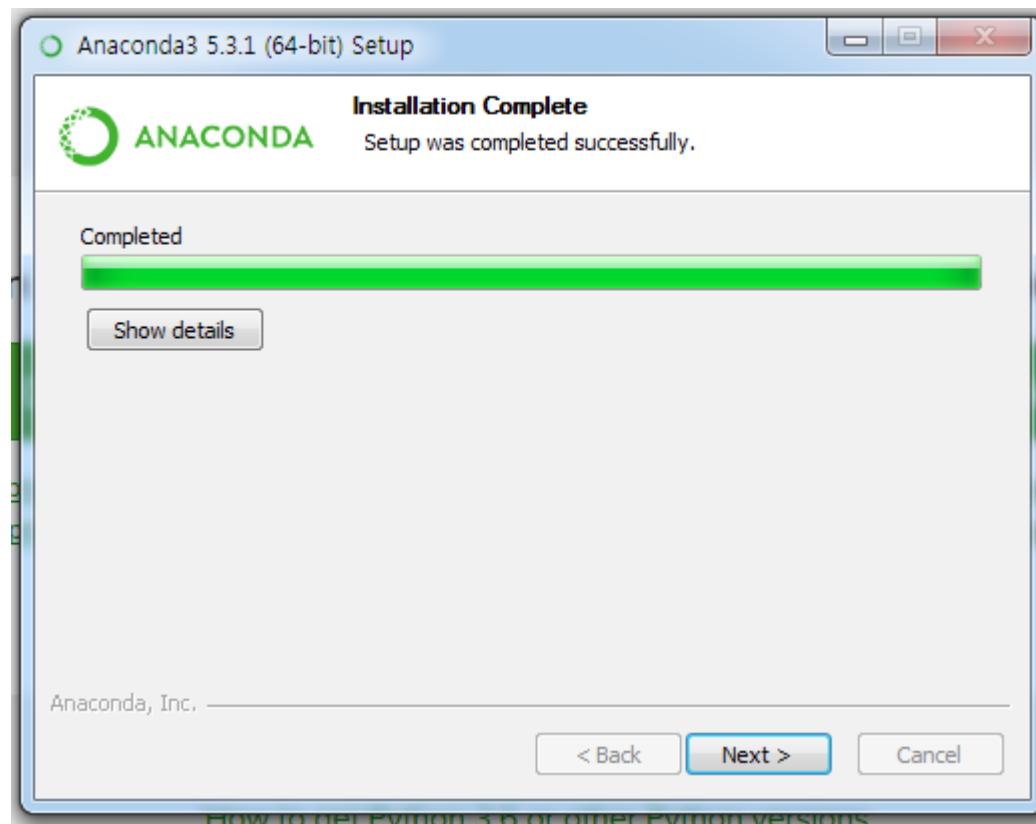
Installation

- Double check



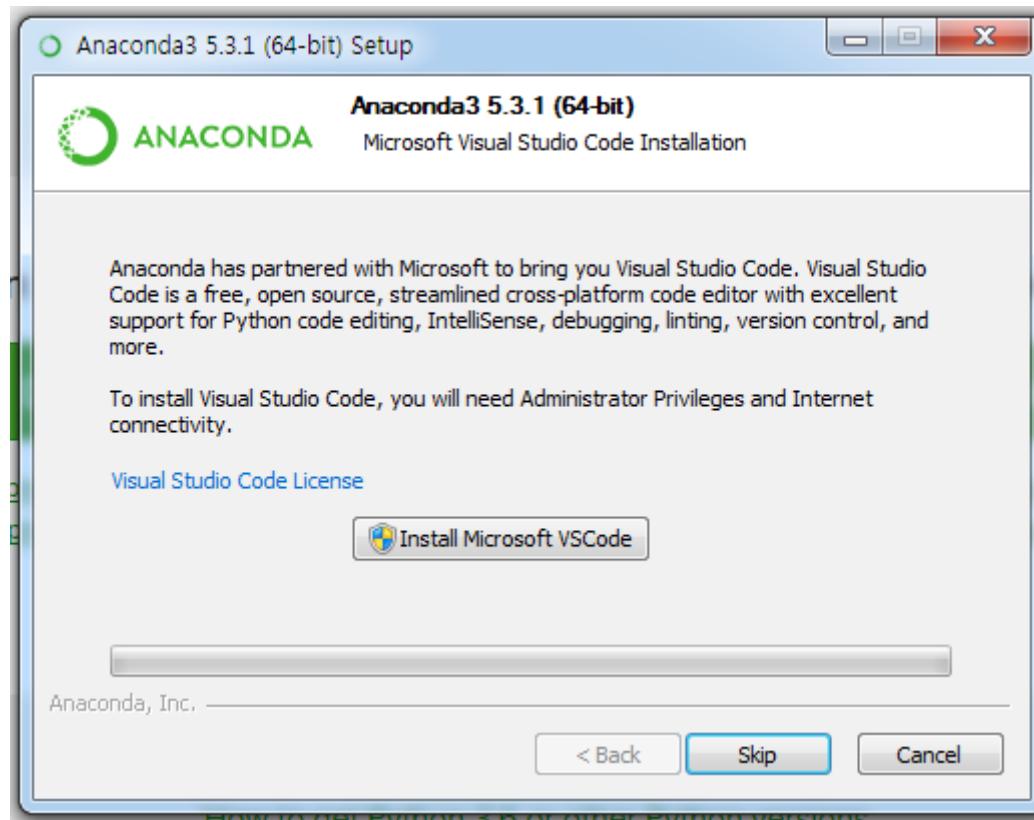
Installation

- Next



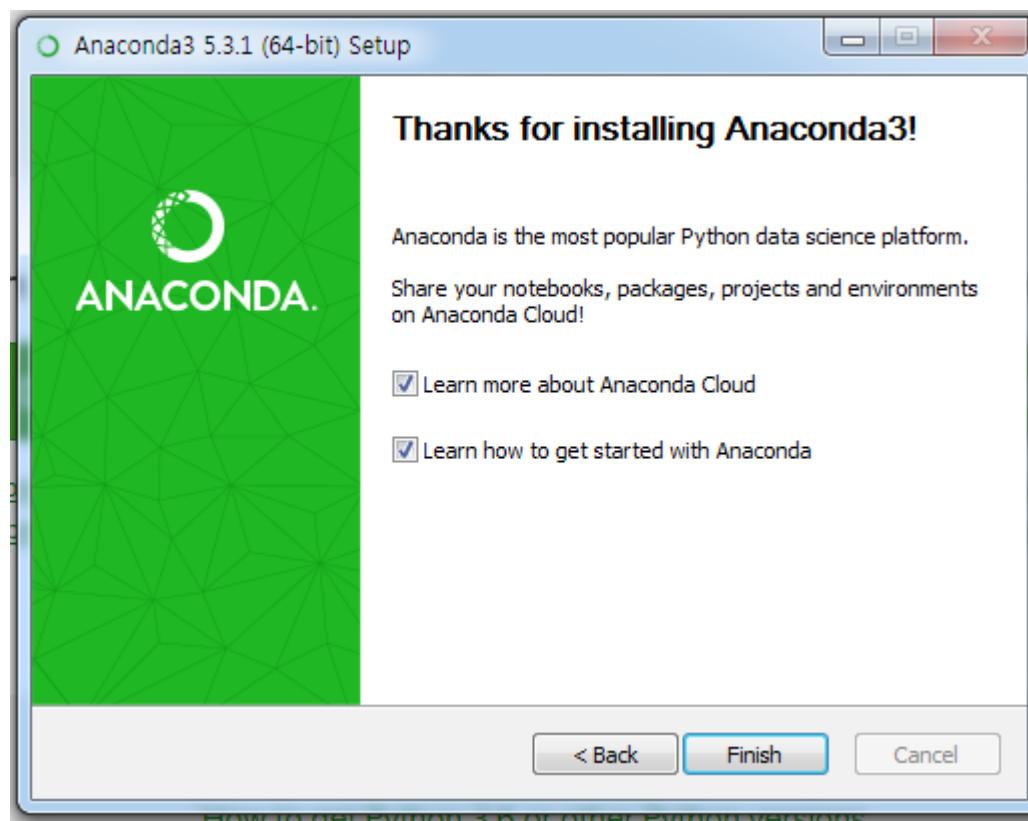
Installation

- Skip



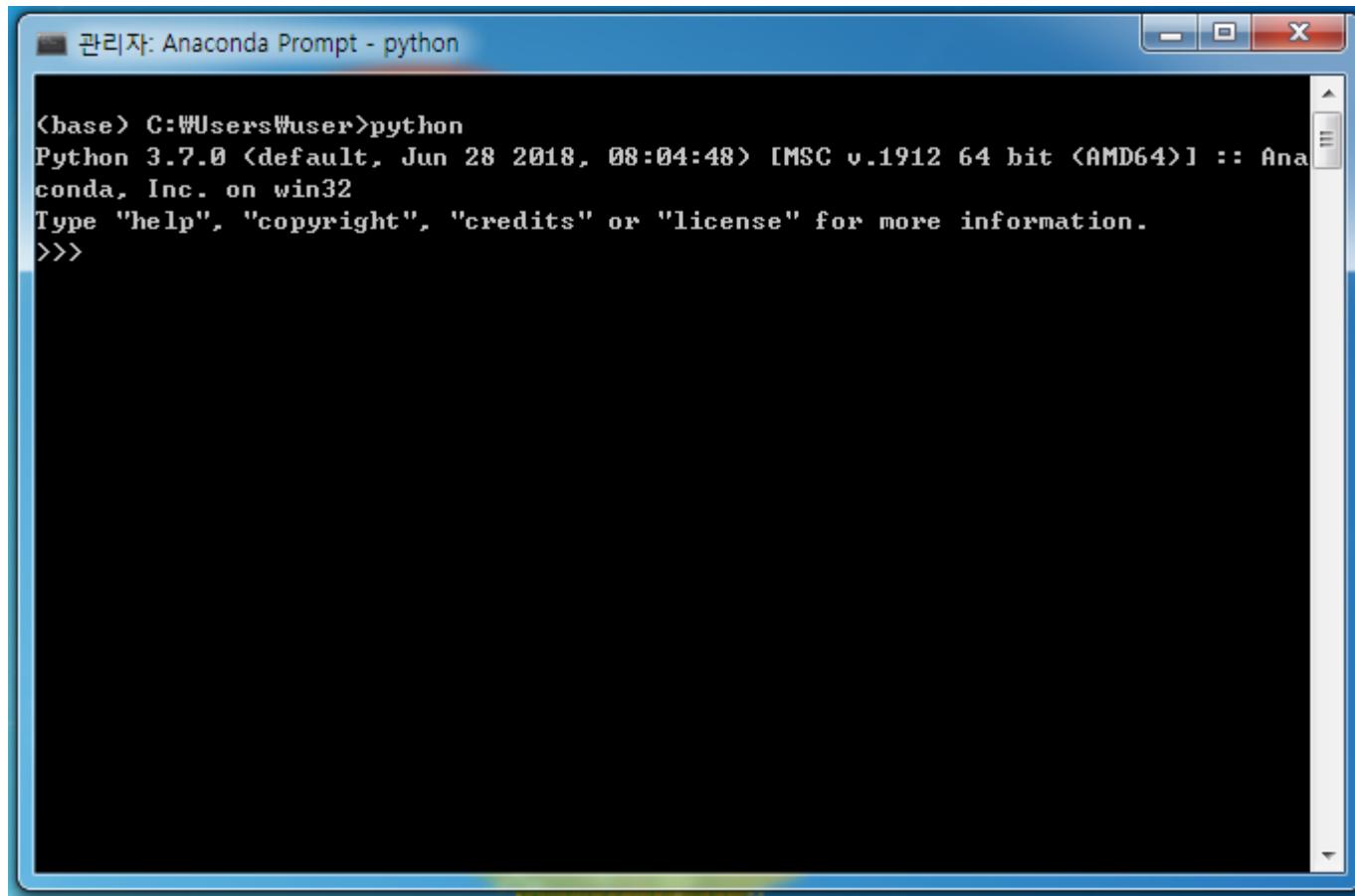
Installation

- Finish



Running

- Windows → Anaconda Prompt



Python Basic

- 출력 함수 (**print**)
- 데이터 타입 (숫자 , 문자열 , 리스트 …)
- 조건문 (**if**)
- 반복문 (**for, while**)
- 모듈 (**os, sys, time**)
- 함수 선언 (**def**)
- 연습 문제 (**practice code**)



Download code in Git-hub

- https://github.com/Artia-Inspirenet/ML_lecture
- Download zip → unzip

No description, website, or topics provided.

The screenshot shows a GitHub repository page for the repository 'ML_lecture'. At the top, there are statistics: 2 commits, 1 branch, 0 releases, and 2 contributors. Below this, there are buttons for 'Branch: master ▾', 'New pull request', 'Create new file', 'Upload files', 'Find file', and a green 'Clone or download ▾' button. A modal window is open over the repository content, containing the 'Clone with HTTPS' URL https://github.com/Artia-Inspirenet/ML_lecture and a 'Download ZIP' button. The repository content itself shows a single commit by 'DongsuShin322' named 'python_basic' with files 'Python_basic' and 'README.md'. Below the repository content, the title 'ML_lecture' is displayed.