

AI Project

0. Introduction

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Goal of Project

- What exactly is AI?
- Introduction to major sub-fields of AI
- Understand basics of Machine Learning
- Implement theories to code
- Apply various learning methods



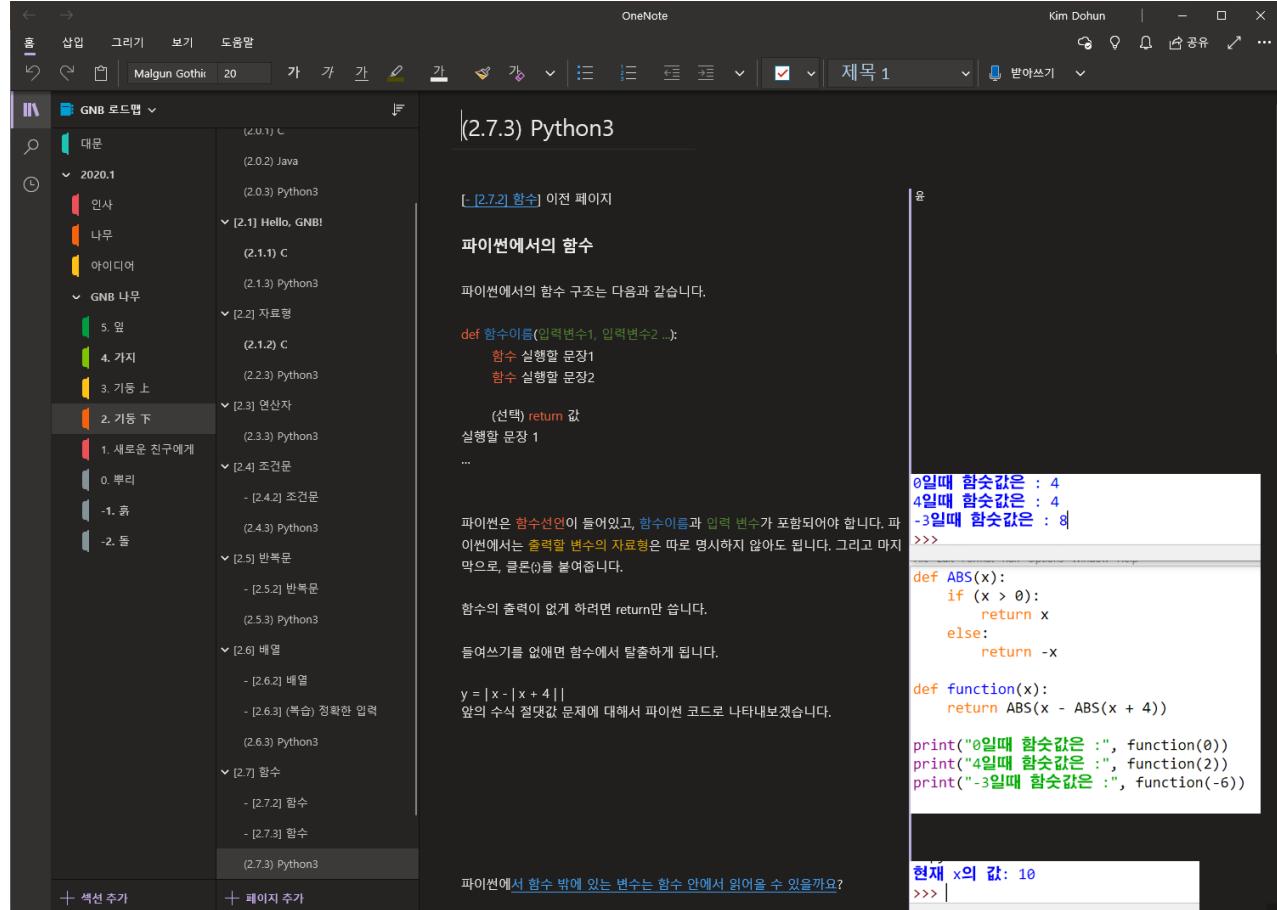
Why Python for AI?

- Most flexible programming language
- Easiest language to master
- Simple and highly readable
- Tons of data-centric packages

Less lines of code ⇒ More data science



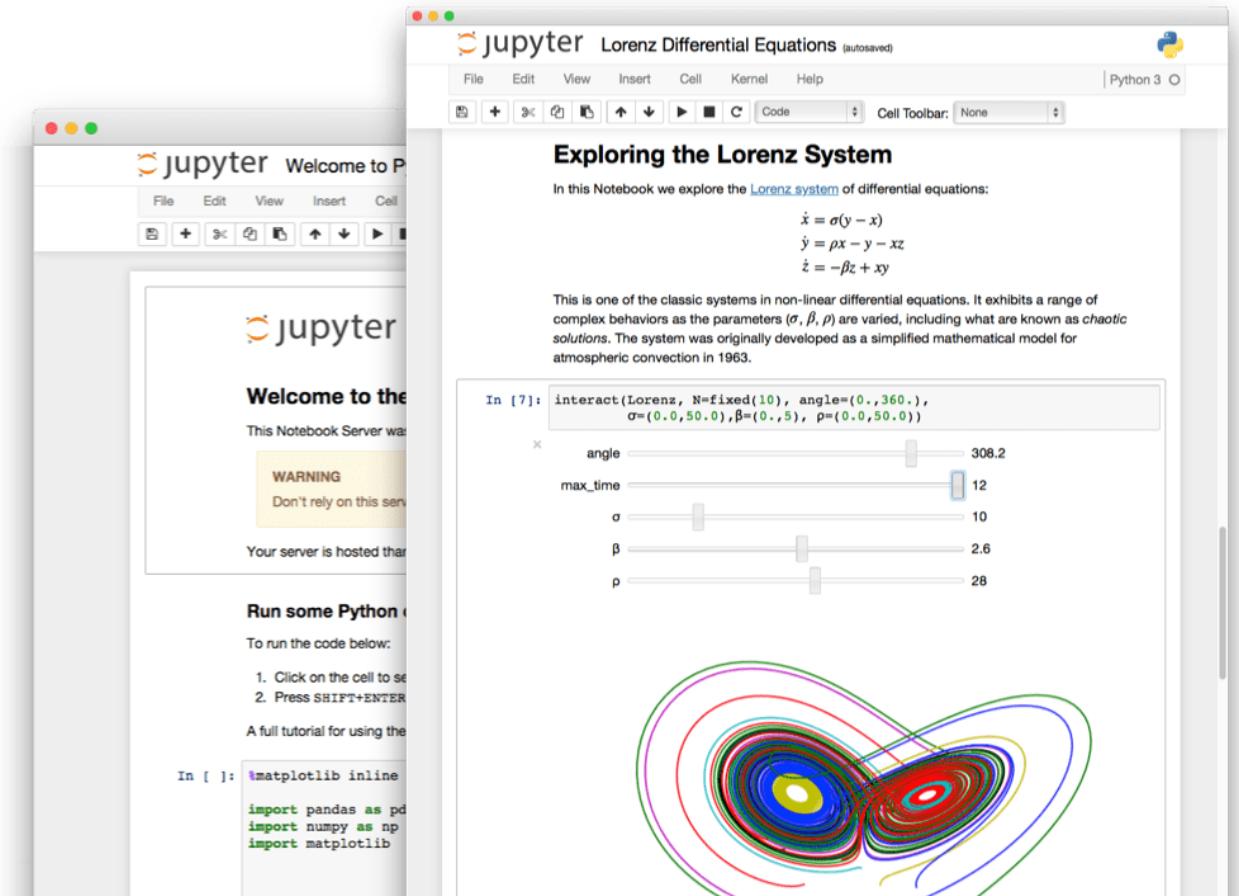
Python Basics



GNB Roadmap

- gnb-roadmap.kro.kr
- 코딩 공부의 길잡이가 될 수 있도록 내용 구성
- 현재 Python의 기본 문법까지 작성 완료
- 내용을 함께 채움으로써 GNB 로드맵의 발전에 기여해주세요!

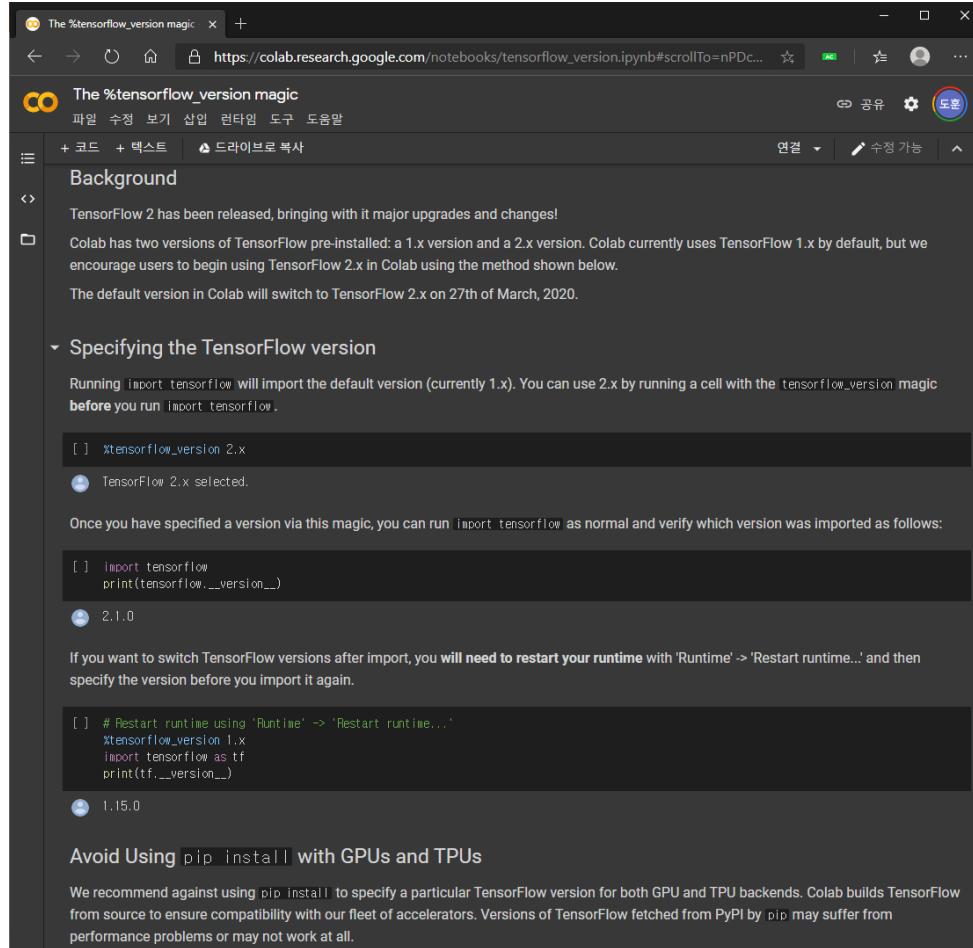
Jupyter Notebook



Jupyter Notebook...

1. Can write Markdown within codes
2. Can visualize the data just below the code
3. Can run lines of code individually

Colaboratory



The screenshot shows a Jupyter Notebook interface in Google Colab. The title bar says "The %tensorflow_version magic". The notebook content discusses the %tensorflow_version magic command. It notes that TensorFlow 2 has been released and provides instructions for switching between TensorFlow 1.x and 2.x. A code cell shows "%tensorflow_version 2.x" being run, resulting in "TensorFlow 2.x selected". Another cell shows "import tensorflow" and "print(tensorflow.__version__)" outputting "2.1.0". A note at the bottom advises against using pip install with GPUs and TPUs.

```
[ ] %tensorflow_version 2.x
TensorFlow 2.x selected.

[ ] import tensorflow
print(tensorflow.__version__)
2.1.0

[ ] # Restart runtime using 'Runtime' -> 'Restart runtime...'
%tensorflow_version 1.x
import tensorflow as tf
print(tf.__version__)
1.15.0

Avoid Using pip install with GPUs and TPUs

We recommend against using pip install to specify a particular TensorFlow version for both GPU and TPU backends. Colab builds TensorFlow from source to ensure compatibility with our fleet of accelerators. Versions of TensorFlow fetched from PyPI by pip may suffer from performance problems or may not work at all.
```

Colaboratory...

1. Can run Jupyter Notebook on web
2. Can use popular libraries without any installation
3. Provides GPU/TPU and it's totally free

All you need is a Google account