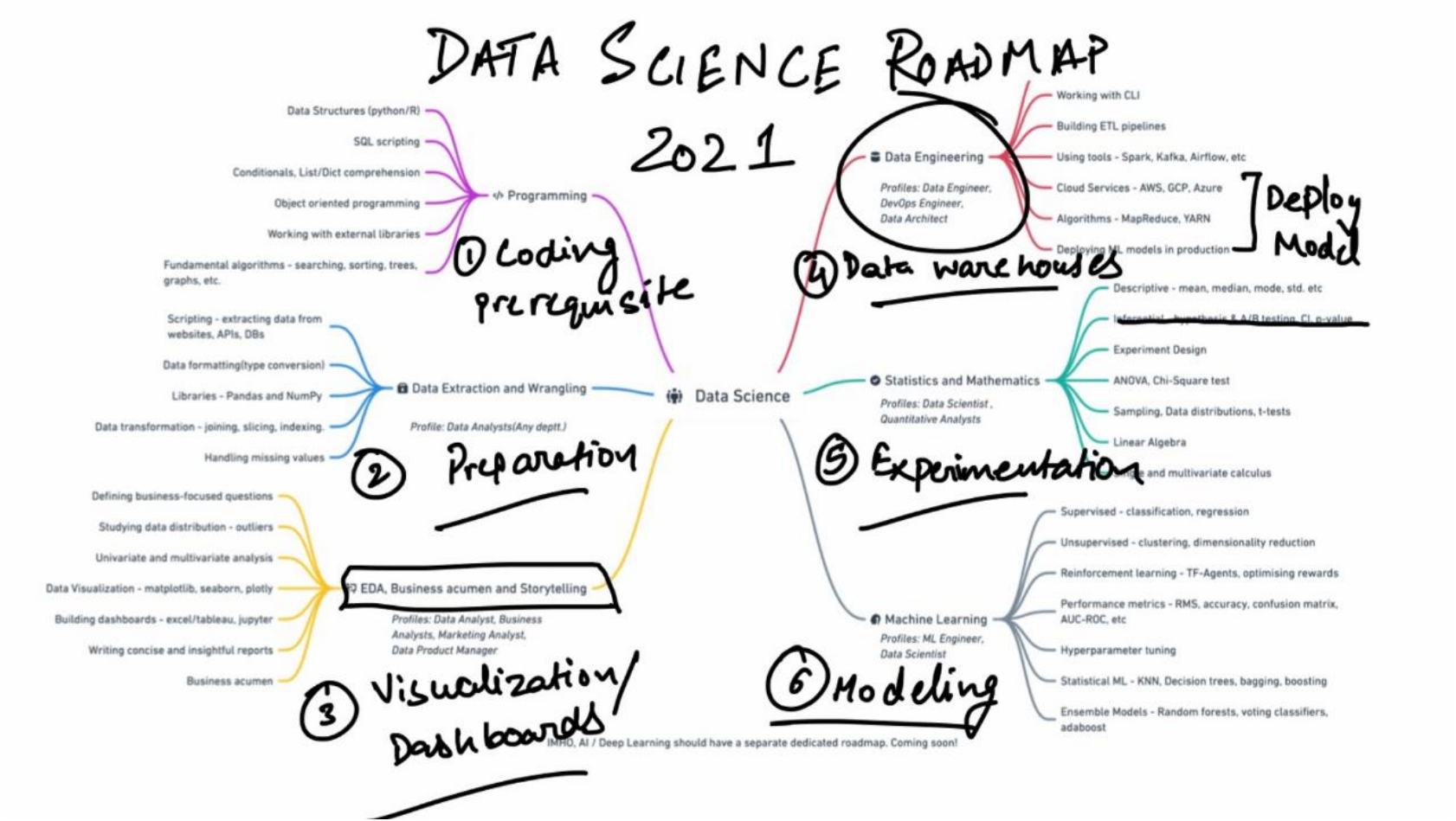
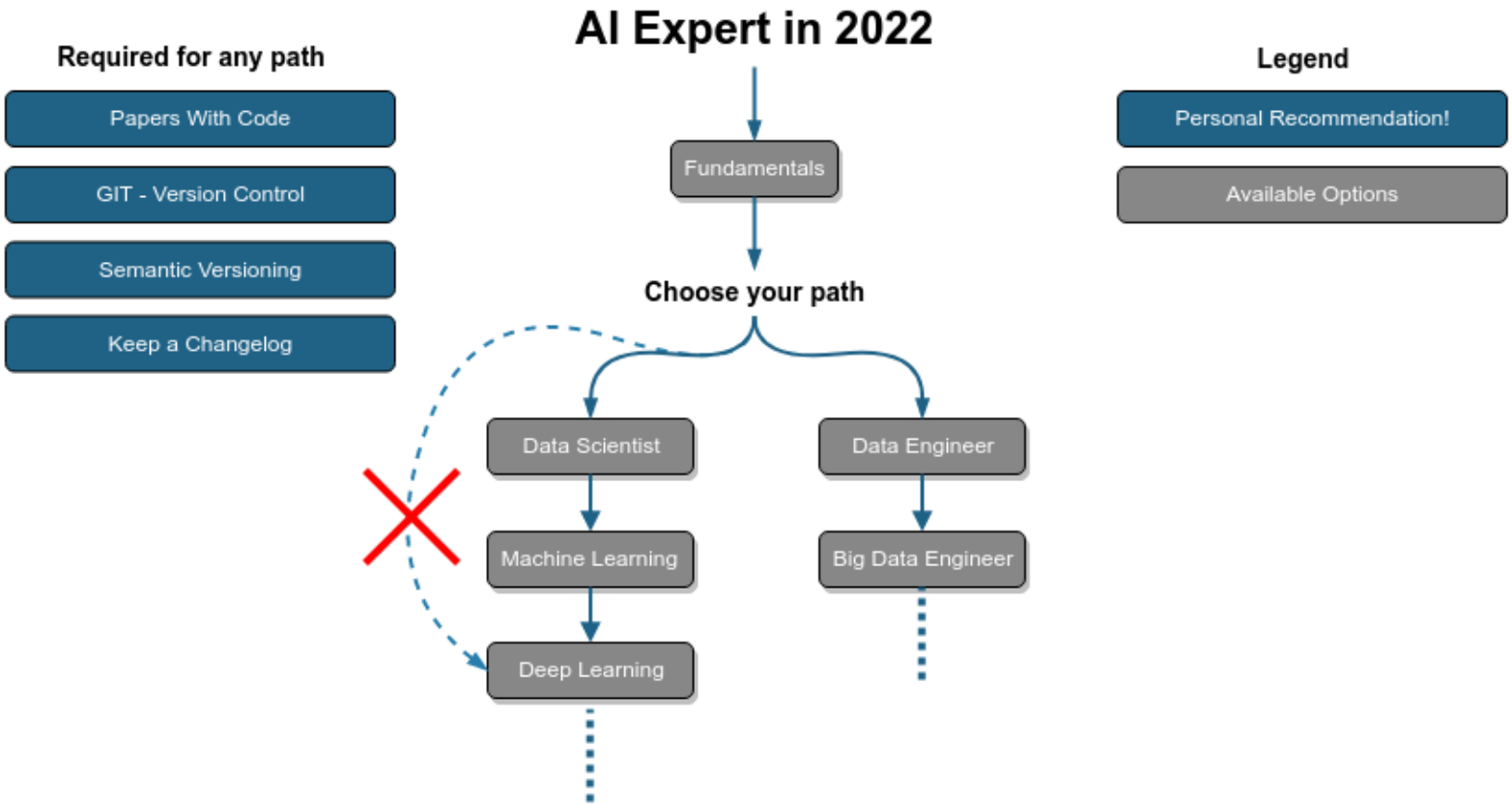


https://www.freecodecamp.org/news/data-science-learning-roadmap/



https://i.am.ai/roadmap/

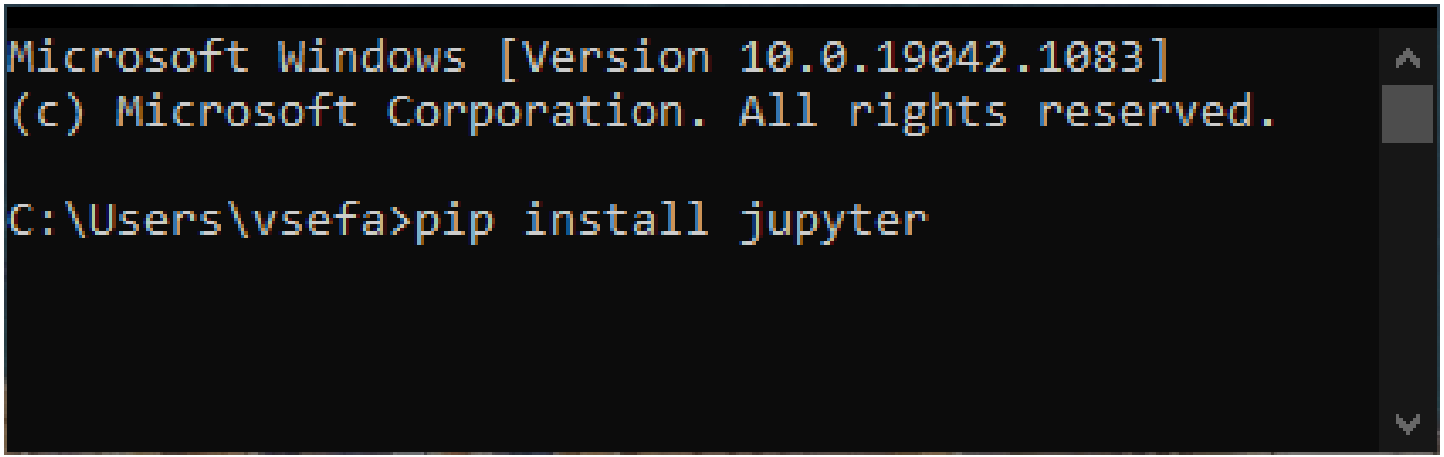
Intro to Jupyter Notebook

01

Instalasi

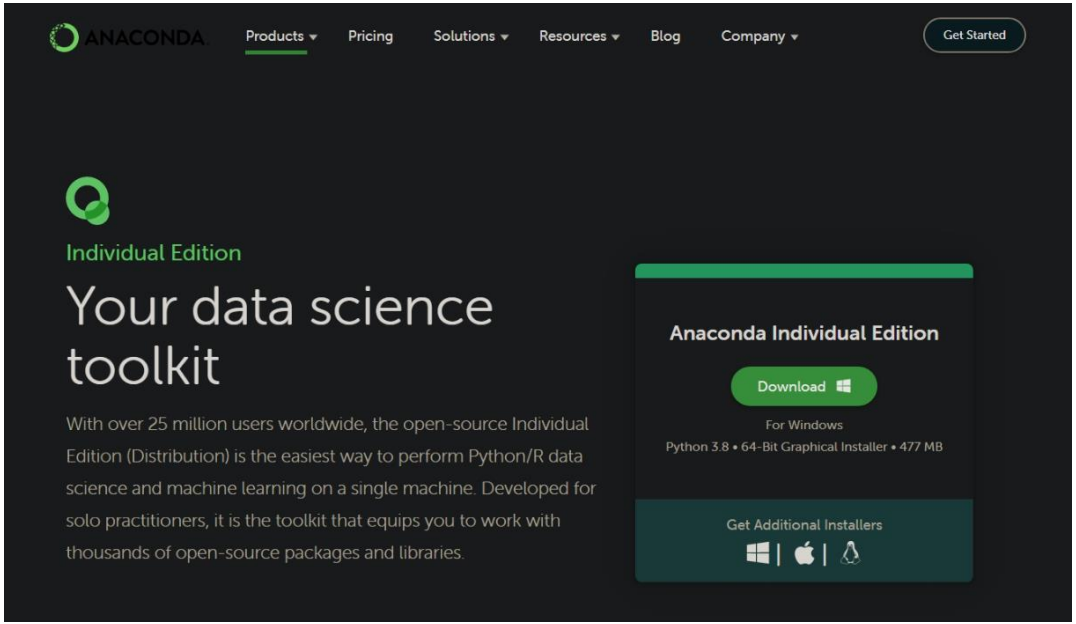
1. pip

```
pip install jupyter
```



2. Anaconda

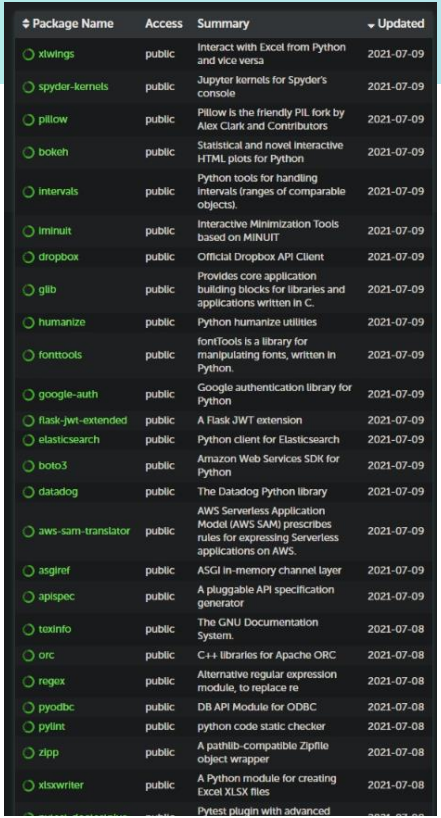
https://www.anaconda.com/products/individual



2. Anaconda

Apa aja yang termasuk di Anaconda

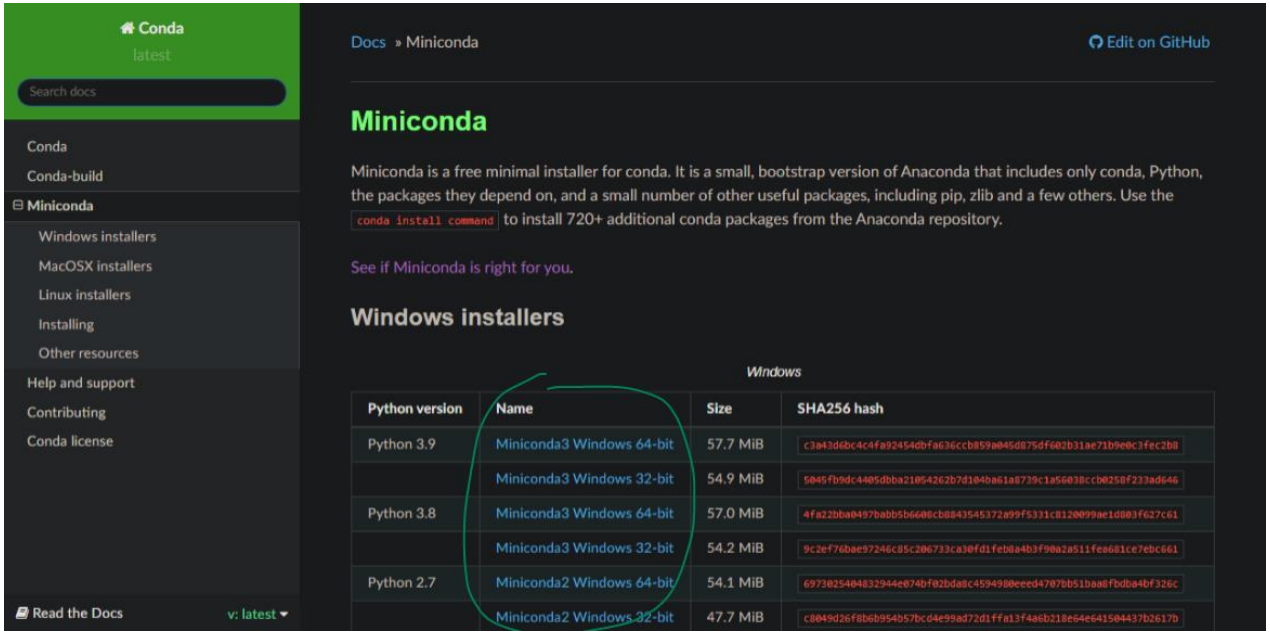
- Package dan environment system, conda
- Library machine learning: TensorFlow, scikit-learn, dll
- Library data science: pandas, NumPy, dll.
- Library visualisasi: matplotlib, seaborn, dll.
- Jupyter Notebook



Package Name	Access	Summary	Updated
xlwings	public	Interact with Excel from Python and vice versa	2021-07-09
spyder-kernels	public	Jupyter kernels for Spyder's console	2021-07-09
pillow	public	Pillow is the friendly PIL fork by Alex Clark and Contributors	2021-07-09
bokeh	public	Statistical and novel interactive HTML plots for Python	2021-07-09
intervals	public	Python tools for handling intervals (ranges of comparable objects).	2021-07-09
iminuit	public	Interactive Minimization Tools based on MINUIT	2021-07-09
dropbox	public	Official Dropbox API Client	2021-07-09
glib	public	Provides core application building blocks for libraries and applications written in C.	2021-07-09
humanize	public	Python humanize utilities	2021-07-09
fonttools	public	fontTools is a library for manipulating fonts, written in Python.	2021-07-09
google-auth	public	Google authentication library for Python	2021-07-09
flask-jwt-extended	public	A Flask JWT extension	2021-07-09
elasticsearch	public	Python client for Elasticsearch	2021-07-09
boto3	public	Amazon Web Services SDK for Python	2021-07-09
datadog	public	The Datadog Python library	2021-07-09
aws-sam-translator	public	AWS Serverless Application Model (AWS SAM) prescribes rules for expressing Serverless applications on AWS.	2021-07-09
asgiref	public	ASGI in-memory channel layer	2021-07-09
apispec	public	A pluggable API specification generator	2021-07-09
texinfo	public	The GNU Documentation System.	2021-07-08
orc	public	C++ libraries for Apache ORC	2021-07-08
regex	public	Alternative regular expression module, to replace re	2021-07-08
pyodbc	public	DB API Module for ODBC	2021-07-08
pylint	public	python code static checker	2021-07-08
zipp	public	A pathlib-compatible Zipfile object wrapper	2021-07-08
xlsxwriter	public	A Python module for creating Excel XLSX files	2021-07-08
		Pytest plugin with advanced	

3. Miniconda

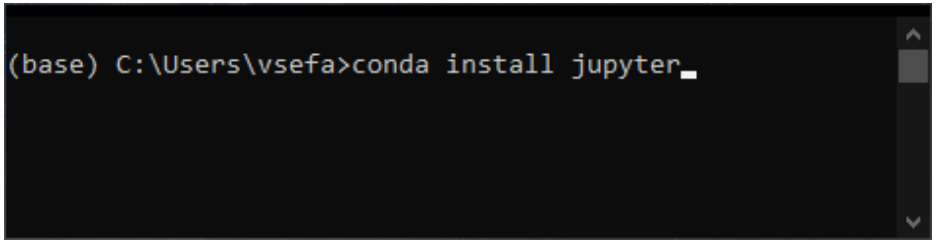
https://docs.conda.io/en/latest/miniconda.html



3. Miniconda

- Versi minimal Anaconda
- Hanya termasuk conda, Python, dan beberapa package kecil
- Install library dengan command: `conda install <nama-library>`

```
(env) conda install jupyter
```



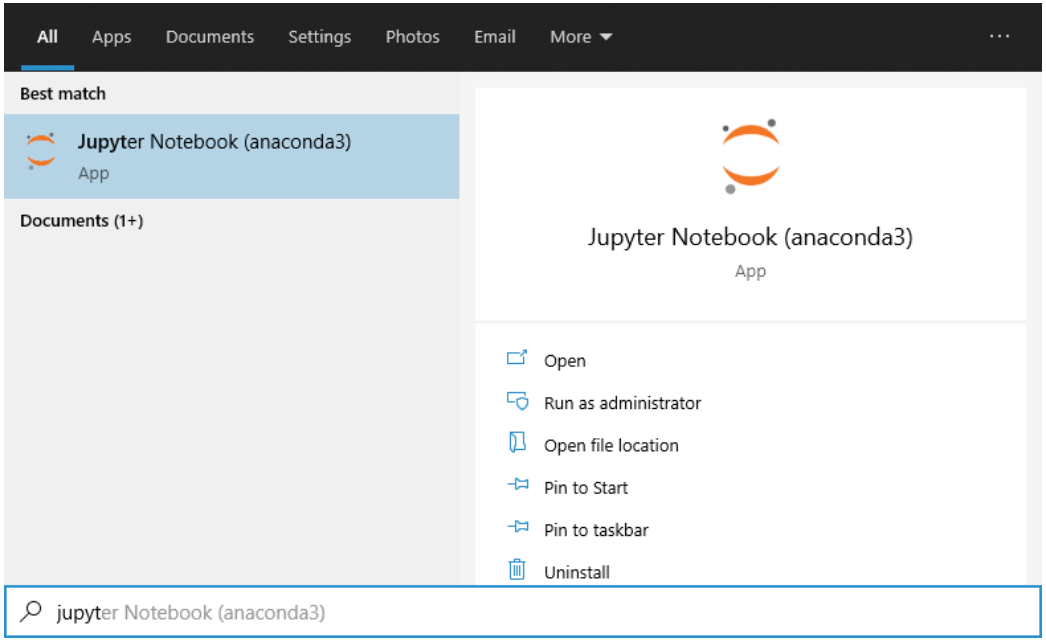
Hands-On

02

Penggunaan

Buka lewat Windows Menu

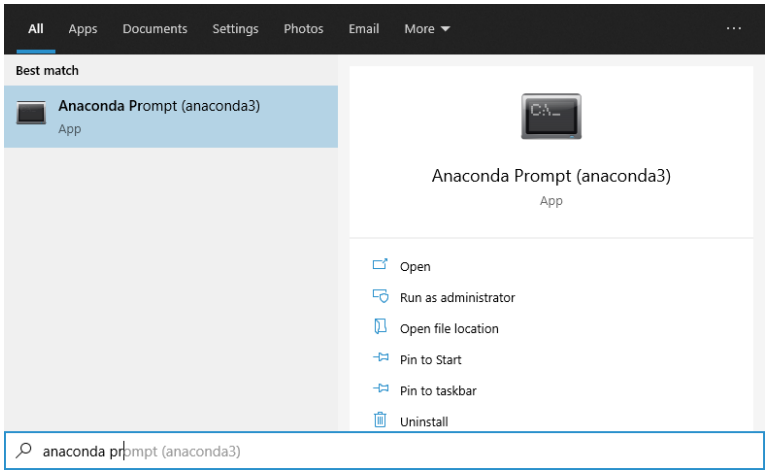
- Terbuka di C:\Users\username

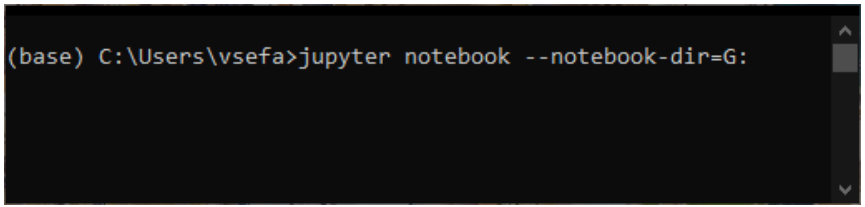


Buka lewat Anaconda Prompt

- Defaultnya terbuka di drive C:\Users\username
- Tambahkan parameter `--notebook-dir` untuk buka di drive lain

```
(env) jupyter notebook
```

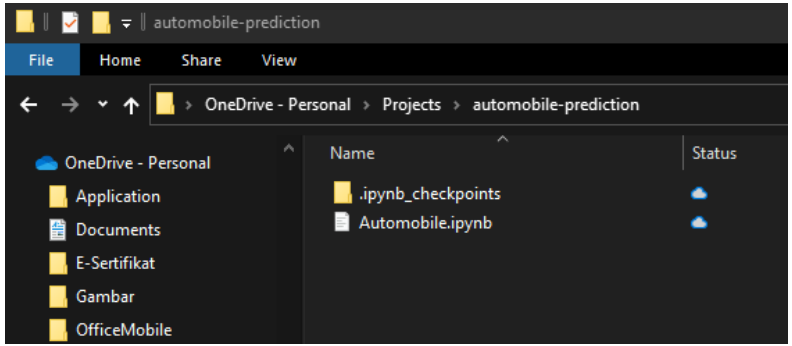


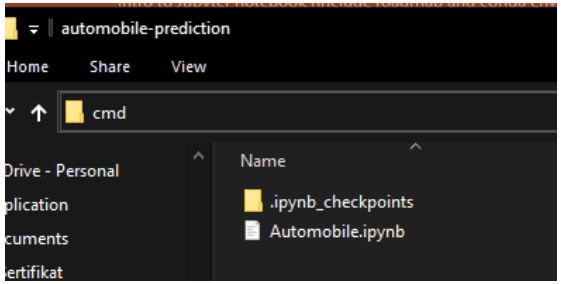


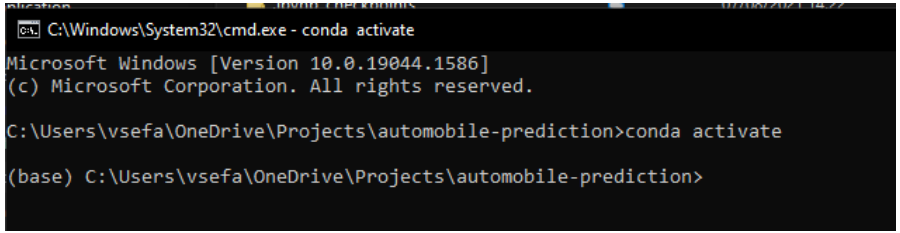
Buka lewat cmd (jika sudah atur path)

- Buka folder project.
- Ketik cmd di bar alamat untuk buka command prompt di lokasi tersebut
- Ketik `conda activate`

```
(env) jupyter notebook
```





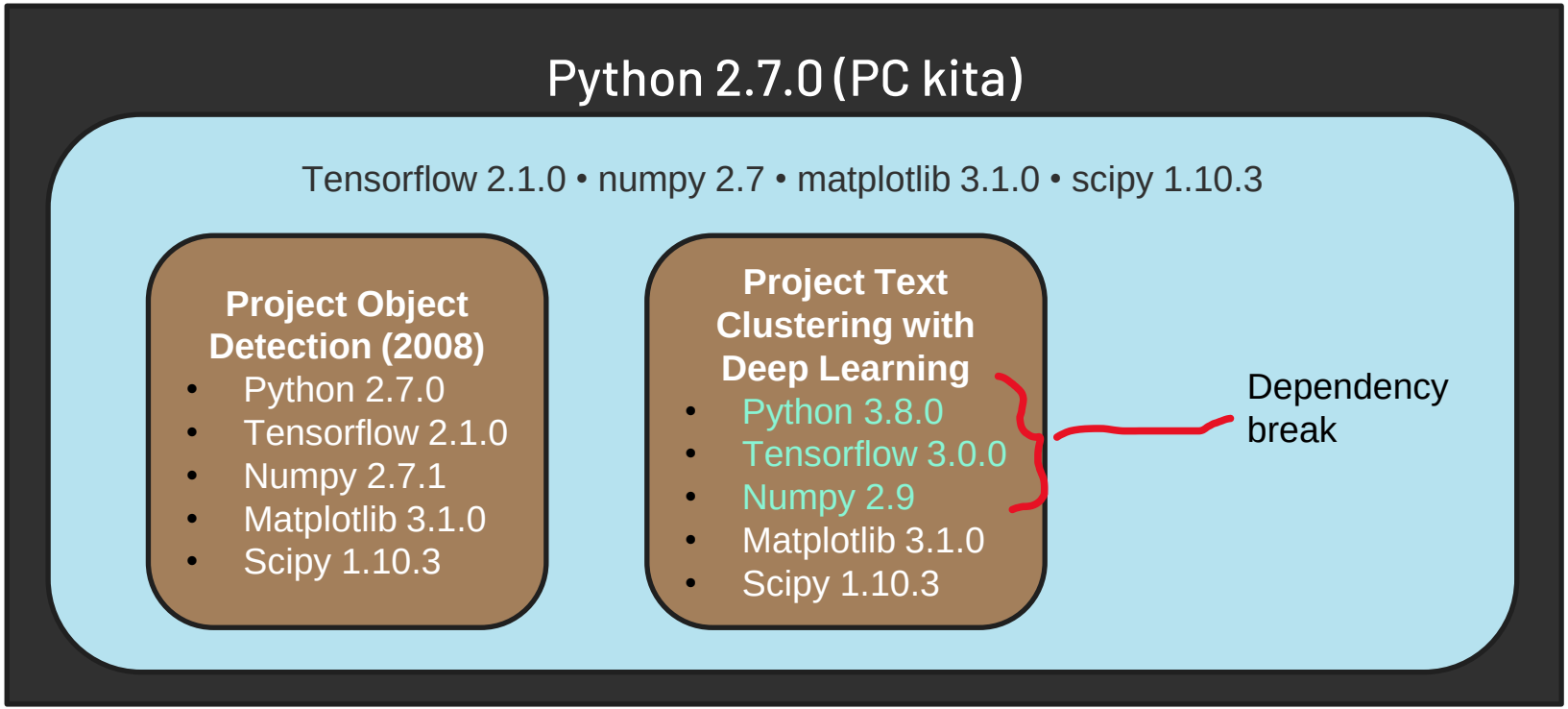


Hands-On

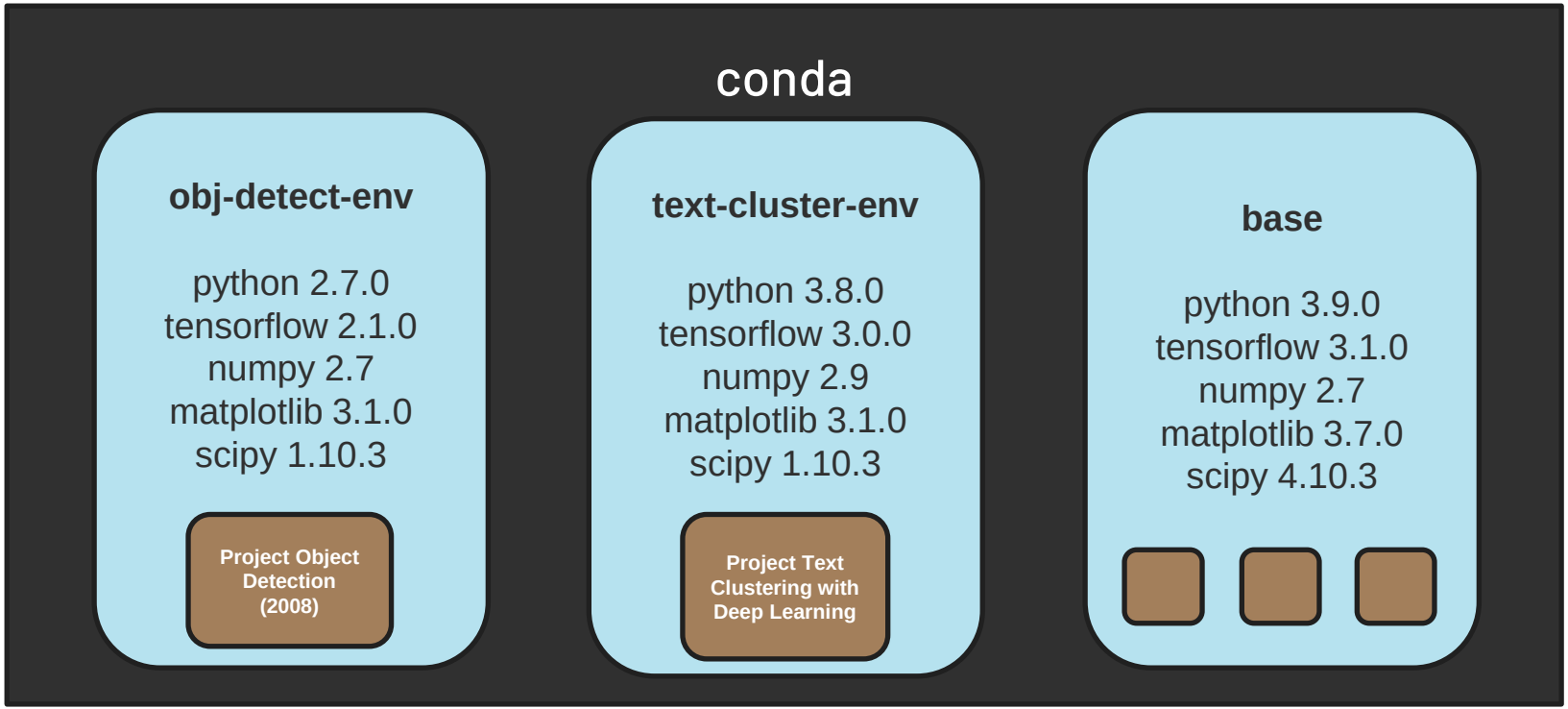
03

Conda Environment

Mengapa Menggunakan Environment



Mengapa Menggunakan Environment



Membuat Environment

1. Membuat environment kosong

```
conda create --name myenv
```

2. Membuat environment dengan Python versi spesifik

```
conda create --name myenv python==2.7.0
```

3. Membuat environment dengan Python versi spesifik + packages tambahan

```
conda create –name myenv python==2.7.0 pandas==3.4.5 scipy matplotlib
```

Menginstall Packages di dalam Environment

Aktifkan environment terlebih dahulu

```
conda activate myenv
(myenv) C:\lokasi\project>
```

Install package (contoh: jupyter notebook)

```
(myenv) C:\lokasi\project> conda install jupyter
```

Hands-On

Berbagi Environment

Anggaplah kita buat sebuah environment berikut

```
conda create –name myenv python==2.7.0 pandas==3.4.5 scipy matplotlib
```

Di dalam environment tersebut, buat file dengan nama *environment.yml* yang isinya package yang dipakai dalam environment kita

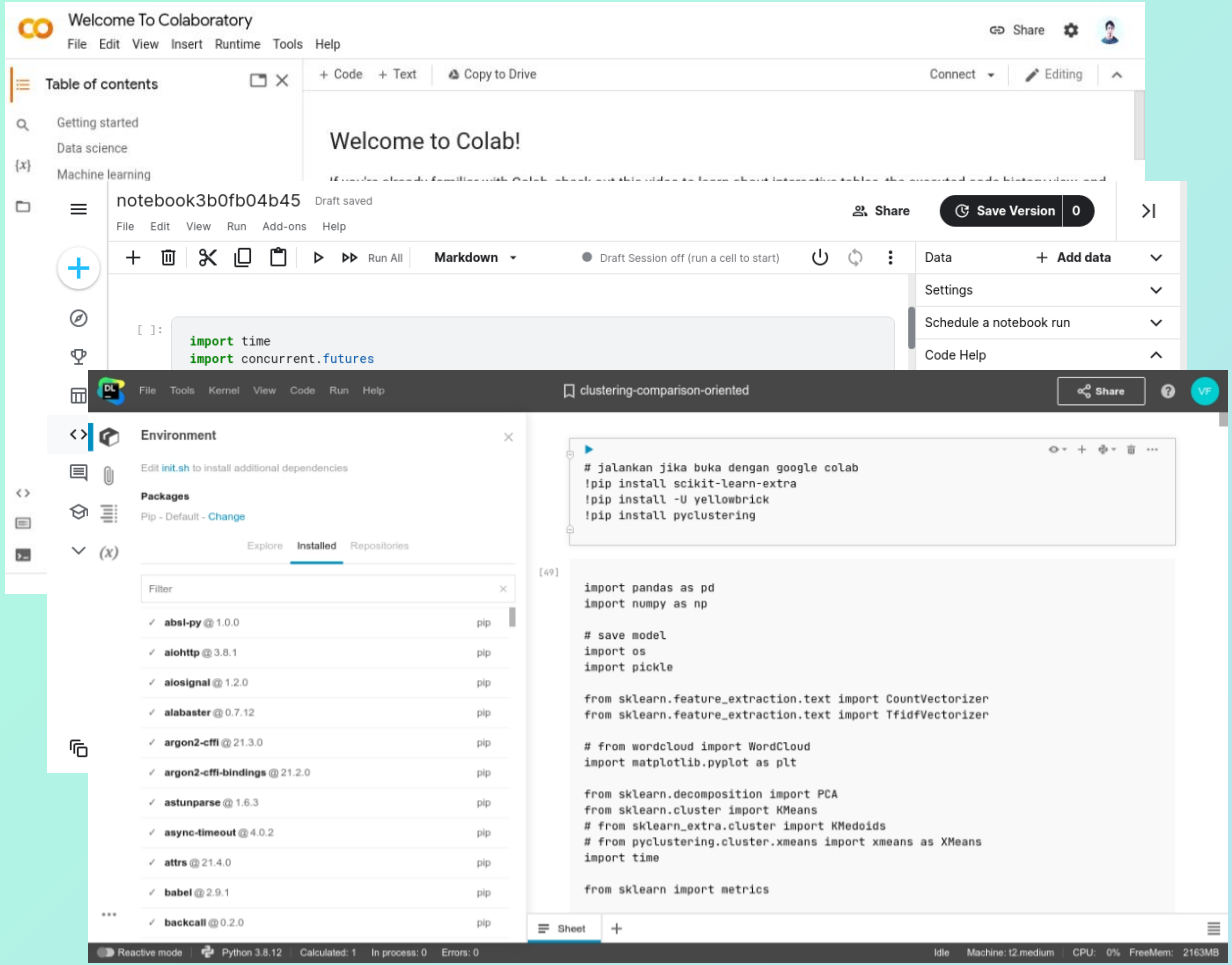
```
conda env export --from-history > environment.yml
```

Di komputer orang lain, gunakan *environment.yml* tadi untuk membuat environment yang sama persis dengan milik kita

```
conda env create -f environment.yml
```

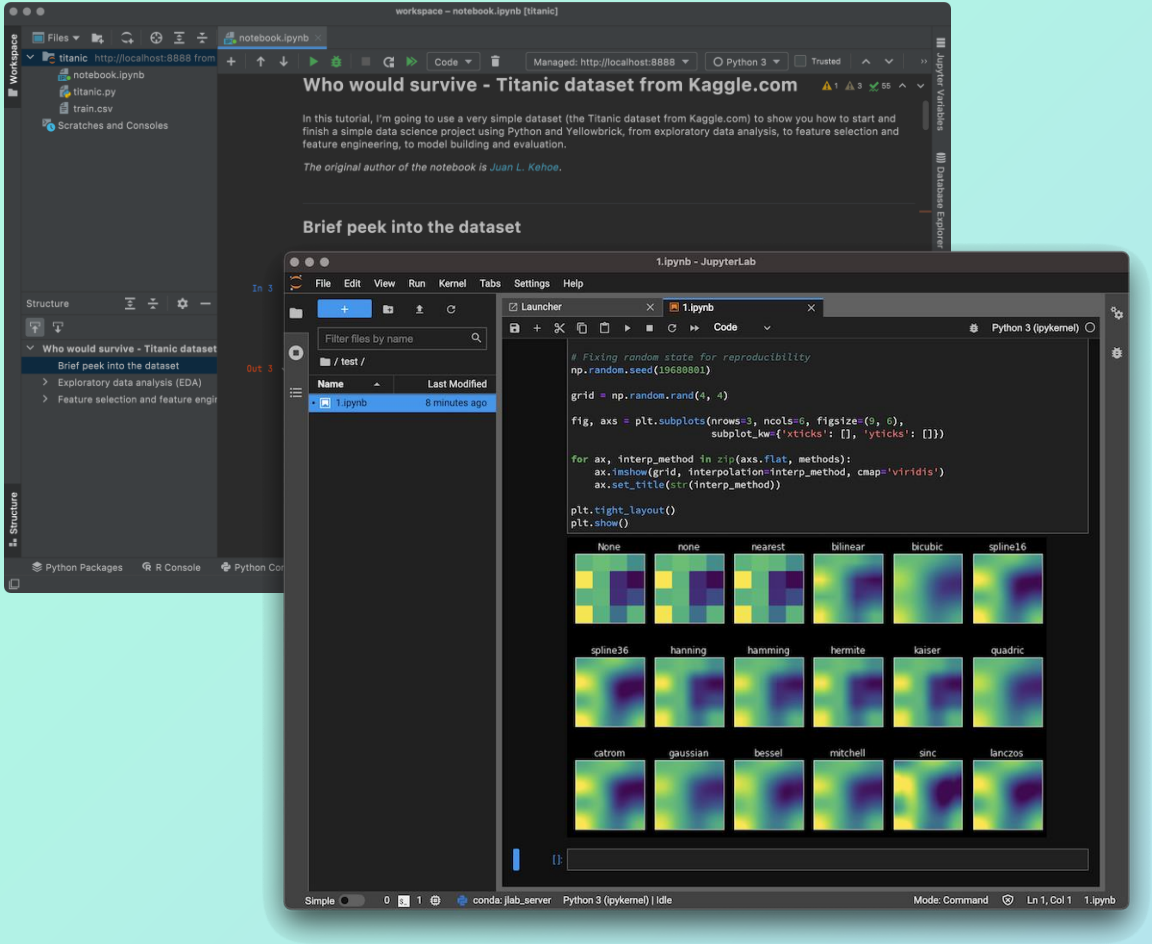
04

Jupyter Notebook Alternative



Aplikasi Jupyter Notebook di web dan cloud

- Google colab
- Kaggle notebook
- IBM Cloud Data Pak
- Jetbrains Datalore



Aplikasi Jupyter Notebook di desktop

- Jetbrains dataspell
- JupyterLab Desktop

Referensi

1. https://www.freecodecamp.org/news/data-science-learning-roadmap/
2. https://i.am.ai/roadmap/
3. https://docs.conda.io/en/latest/miniconda.html
4. https://www.machinelearningplus.com/deployment/conda-create-environment-and-everything-you-need-to-know-to-manage-conda-virtual-environment/
5. https://www.codecademy.com/article/setting-up-jupyter-notebook