

Meta Clustering Codes

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Installation of Python environment

Install Python and Pip (a Python-management tool) Run the following in a terminal

```
pip3 install --user virtualenv
```

The above will install a tool that allows us to create a virtual environment for running our python package

Then, cd into the project folder and install virtual env there

```
cd /Users/...  
python3 -m virtualenv venv
```

The above will create a virtual environment called venv

Finally, activate it by running

```
source venv/bin/activate
```

check the Python version by running

```
which python3
```

Install necessary packages

In the terminal, stay on the path of the downloaded folder, and run

```
pip3 install -r requirements.txt
```

Reproduce each experiment

Run each experiment script by

```
python3 experiments_[Name].py
```

The folder contains the following experiment files

1. experiments_accuracy.py (Simulation 1: clustering accuracy)
2. experiments_robust.py (Simulation 2: robustness against candidate models in the cross validation)
3. experiments_CTscan.py (Application 1: more accurate prediction in CT Image data)
4. experiments_EGS.py (Application 2: robust learning in Electrical Grid Stability data against adversaries)
5. experiments_fairness.py (Application to Data Fairness)

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