Scientific Computing

Start programming in Python

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Latest version available on Github, this PDF is version a465e9e.

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Organizational matters

Organizational matters

- Please participate in writing today's lecture notes:
  https://yourpart.eu/p/lecture-scientific-computing03-notes
- Glossary:
  https://yourpart.eu/p/lecture-scientific-computing-glossary
- Answers for Git questions from first homework:
  https://yourpart.eu/p/lecture-scientific-computing

Comments on the last homework

- Groups after last homework submission, today 11:30:
  - adob360 (4 members)
  - aleks-cortijo (4 members, but one without name)
  - barbarakalous (5 members)
  - Bokubst (3 members)
  - fogerl (5 members)

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- Hint on placeholders:
  If you see text enclosed in <> on our slides or in the notebook such as

  `<something here>`

  it means that `<something here>` should be replaced by some input from your side, removing the <> (hopefully obvious from the context). Anything else can just be copied.

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  it means that `<something here>` should be replaced by some input from your side, removing the <> (hopefully obvious from the context). Anything else can just be copied.
- Many Git accidents, in some repositories there is still personal data published. If you want, follow the instructions for removing them (involves advanced Git tasks) or delete the fork on Github, then fork the homework repository again and commit the *.txt file with your names again (can be in one commit by one person).

Leftover from last week

Using Jupyter Notebooks

If you want to use conda environments in your notebooks, do the following:

- Install *ipykernel* in your environment

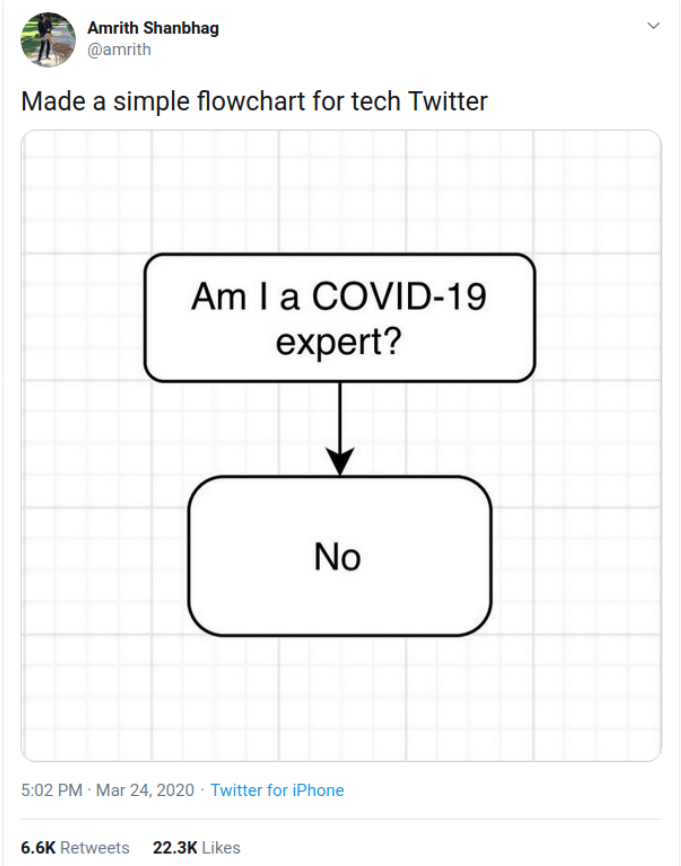
```
conda activate <conda-environment>
conda install ipykernel
conda deactivate
```

- Additionally, install *nb_conda_kernels* in *base* if you run your jupyter notebook from base:

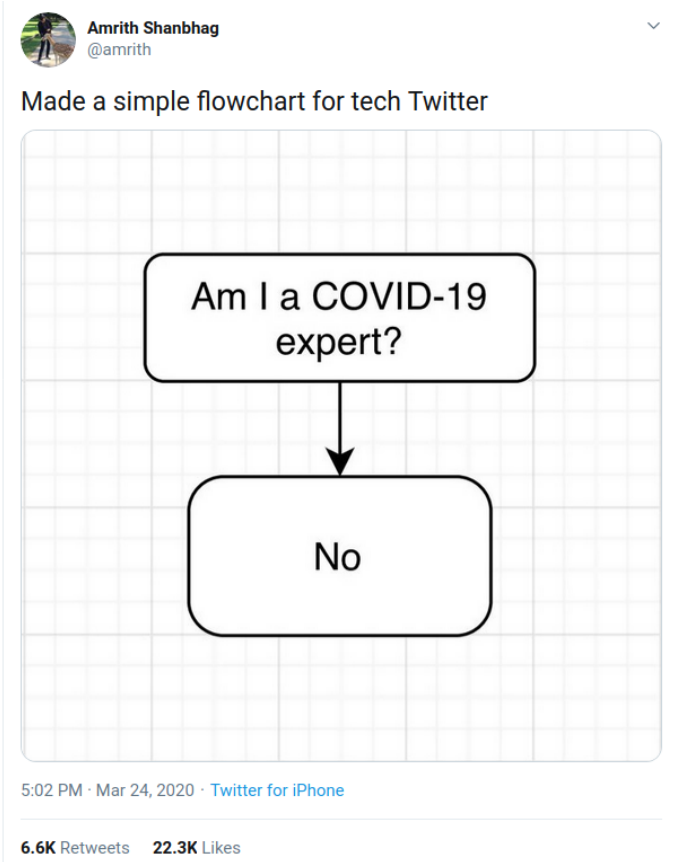
```
conda activate base    # could be also some other environment
conda install nb_conda_kernels
```

Python introduction

Disclaimer


Amrith Shanbhag
@amrith
Made a simple flowchart for tech Twitter
Am I a COVID-19 expert?
No
5:02 PM · Mar 24, 2020 · Twitter for iPhone
6.6K Retweets
22.3K Likes

Disclaimer



Disclaimer: Models used in this lecture are highly simplified and supposed to serve as examples to study Python. Don't use models as prediction. If you do your own data analysis on important topics, compare it with other published studies.

If you are interested in real expertise, check e.g. the Drosden Podcast

Source: https://twitter.com/amrith/status/1242481942026530817

Python introduction

See Jupyter notebook:
lecture03.ipynb

Homework assignment

Homework assignment

- Fetch the latest changes from the upstream repository, to get the homework Notebook:

```
cd path/to/homework-scientific-computing
git pull --no-edit upstream master
git push
```

- Start Jupyter and solve the exercises in the notebook: homework03.ipynb.
- Commit the notebook file and push it to your fork.

Due on 29th of April, 17:00.

To avoid merge conflicts, you can either commit a copy of the notebook and add your Github name to the filename or solve the exercises together with your group members and `git pull` before starting to work on the notebook and `git push` before the next group member starts working on it.