



DIS08 – Data Modeling

047 – Python – Tutorial Session

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Technology
Arts Sciences
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Topics for Today

1. Q&A

2. Python & Jupyter

3. Python Tutorial

Open Questions



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3. Python Tutorial

Python Set Up

Linux/ OSX

Is Python installed?

```
$ python3 -V
```

3.5 onwards is required!

If not installed:

```
$ sudo apt-get install python3.9
```

(3.10.0 new, “.0 versions” often problematic)

Windows

For Windows, there is a .exe installer!

Jupyter Lab Set Up

Jupyter Notebooks are ideal for comprehensible programming:

- add Markdown blocks
- run part(s) of your code
 - You do not have to import and calculate everything new if you just want to add or change a little aspect of your code

Installieren:

```
$ pip install jupyterlab
```

Start via

```
$ jupyter lab
```

Windows

```
python -m pip install --upgrade pip
```

More installation help and stand-alone-version (not very good):

<https://jupyter.org/>

Pip (Python Package Installer)

Packages you need:

- Pandas
- Numpy
- BeautifulSoup

Packages I recommend:

- Tqdm
- Pandarallel
- SciKitLearn
- Scrapy
- NLTK
- Matplotlib

... and many more!

Python comes with a lot of modules/packages:

<https://docs.python.org/3/py-modindex.html#cap-r>

You can even publish your own python packages:

<https://packaging.python.org/tutorials/packaging-projects/>

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Einrichtung von Jupyter Lab

Learn Python:

<https://www.w3schools.com/python/>

- Interactive Tutorials, Quizzes, Exercises