Corona Virus Computations and Plots using Python Notebooks in Google Colab

Prof. Dr.-Ing. Gerald Schuller, Media Technology, Technische Universität Ilmenau

Jupyter Notebooks

- Used for **documentation with code**
- Jupyter notebook starts a **local server** for a browser, which displays text and runs code
- Related: JupyterLab
- “NBViewer” can be used to publish it, but the code is then **fixed**
- “Binder” can publish it and run the code, but may have a **very long start time**.

Colab and Github

- Google Drive offers “**Colaboratory**”, a more or less experimental feature
- Start it with “New”-”More”-”Colaboratory”
- There you can enter **Python Jupyter Notebooks** which run on **Google’s servers** (fast)
- Good for e.g. machine learning,
- or for **interactive presentations**
- They can be saved into **Github and published**
- In such a way you can **publish an interactive presentation**

Text Cells

- Text formatting using **Markdown** language
- **Links**
- **Latex** style **formulas**
- Show embedded Websites

Form Cells

- Hide code
- Add inputs
- Pulldown menus
- Date entry
- Slider

Data Processing

- Read-in up-to-date data from online repositories, like the Johns-Hopkins University Corona Github repository
- Interactive plots (hover, zoom…) using Plotly
- Example: https://github.com/TUIlmenauAMS/CoronaComputationPrograms