


# SDG Africa Partnership

Workshop with Ellen and Charles, two scientists from Makerere University Kampala, Uganda, together with Clein and Rolf from HSRW 

## 2023-11-07

- Download and install of QGIS
- Download and install anaconda
- conda environment creation
- installation of libraries according to [https://github.com/rolfbecker/EE\\_3.07\\_Geodata\\_WS2022/tree/main/gdms0020\\_Course\\_Preparation](https://github.com/rolfbecker/EE_3.07_Geodata_WS2022/tree/main/gdms0020_Course_Preparation)
- Correction of packages: jupyterlab pandas geopandas shapely fiona pyproj rasterio sqlalchemy psycopg2 ipython-sql bs4
- <https://cs231n.github.io/python-numpy-tutorial/> up to numpy

Extra material:

- pandas tutorial (comprehensive): [https://github.com/ageron/handson-ml3/blob/main/tools\\_pandas.ipynb](https://github.com/ageron/handson-ml3/blob/main/tools_pandas.ipynb)

## 2023-11-08

- \* Finished the numpy tutorial from cs231. Skipped the image processing for now
- \* Followed partially the hands-on-ml3 tutorial (tools\_pandas.ipynb). Material covered:
- \* import pandas and alias
- \* Series: create from list, give index, give name, create from dictionary. slicing, alignment, plotting
- \* Handle time with pd.date\_range()
- \* Creating a Dataframe: by dictionary.
- \* selecting columns, accessing values, filtering, transposing. **skipped multi-indexing, stacking and unstacking,**
- \* dataframe read: read\_csv and read\_excel. And dataframe write

Homework: explore the real data:

[https://firebasestorage.googleapis.com/v0/b/fao-aquastat.appspot.com/o/Excel%2FAfrica-dams\\_eng.xlsx?alt=media&token=b621f090-60cf-46f1-8472-9003ce314066](https://firebasestorage.googleapis.com/v0/b/fao-aquastat.appspot.com/o/Excel%2FAfrica-dams_eng.xlsx?alt=media&token=b621f090-60cf-46f1-8472-9003ce314066)

## 2023-11-09

- \* first notebook gnb0101\_DWD\_

To correct:

- 1) Explain what the grabfile function is doing with doc string
- 2) Show them what the problem of the file is by uploading in QGIS
- 3) Let them import the file by themselves, So they see the problem again
- 4) Notice that station ID is being read as integer. So correct that by a dtype dictionary
- 5) Update the administrative boundaries links

From:

<https://wiki.eolab.de/> - **HSRW EOLab Wiki**

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