Exercise class 7

Introduction to Programming and Numerical Analysis

Class 3 ans 6

Annasofie Marckstrøm Olesen

Spring 2024

UNIVERSITY OF COPENHAGEN

Take-aways from this week's lectures

APIs

Problem set 4

This week's letures

This week you've seen a bunch of tools for working with data:

- Fetching data from **API**'s using provided Python-packages.
- Combining datasets using `pd.merge` and/or `.join`
- Transforming to data using the **split-apply-combine** approach, and `.apply`, `.transform` and `.agg` methods

Combined with your knowledge from previous lectures on cleaning data as well as presenting results in plots and tables, you have a strong toolbox for empirical work in Python.

Tips for working with API's

An API (Application Programming Interface) is a **communication line** between your software (Python) and some other software (ie. Statistics Denmark's database).

API's are like **librarians** or **front desk workers** that you can talk to and that connect you to the information you want.

Tips for working with API's

Some API's have associated **Python packages** that can connect to the API and pull and parse data for you (eg. DstApi for Statistics Denmark or pandas-datareader).

Otherwise, you need the `requests`-library. Not a mandatory part of this course, but check out this blog post or the DataCamp course *Intermediate Importing Data in Python* if you're interested.

Always make sure to **check out the documentation** for the API you're using.

Problem set 4

If you didn't get through **problem set 3** last time, you should **do that first**. See last week's slides for notes on the problem set + a bug.

In problem set 4, you will be fetching data from Statistics Denmark using DstApi. Documentation is here. If you are unsure about which arguments to pass to the `.get_data()`-method, **see documentation** for help.

Working with Pandas can be very syntax-heavy, so it is okay to glance at the answers - but make sure you understand the syntax.

Next time

Video lectures

- No video lectures

Exercise:

- Introduction to data project
- Work on data project