Preparing for the Course

Which computer to use at the course

For the workshop, computers will be provided with all necessary software installed. However, personal computers may also be used, if all software has been installed and is ready to use – you can test if that is the case with the preliminary material as we describe below. This has the advantage of you being able to use Python on your own computer during and after the course.

Before the course starts

It is highly recommended that participants go through the preliminary notebook material (00_preparation.ipynb) at least once. Below, we will explain how to setup the working environment in order to work with Python and Jupyter Notebooks. We will explain two ways to work with the course material, either by using your own machine, or a remote service called “GESIS Binder”.

Set up the working environment locally (on your own machine)

Anaconda is an open data science platform powered by Python. It comes with Python already installed, including many code libraries / packages for Python (and it manages those packages for you). It also comes equipped with Jupyter Notebooks (an open-source web application that allows you to create and share documents that contain live code, equations, visualizations and narrative text). We will be working with the newest Python version (currently 3.7), and we will use Jupyter Notebooks for the teaching. Anaconda can be downloaded here:
https://www.continuum.io/downloads

A good video describing the general installation of Anaconda:
https://www.youtube.com/watch?v=YJC6ldI3hWk
(we recommend using the option to add it to your PATH - you will be asked in the installation process - on your machine if you have **not** previously installed Python on it)

You can launch Jupyter notebooks either directly (on Windows through the icon in the start menu; on Linux and Mac by typing “jupyter notebook” in the terminal) or through the Anaconda Navigator. Once launched, a browser window should automatically open with the Jupyter Notebook interface.

Troubleshooting resources can be found at:
https://docs.continuum.io/anaconda/install
http://jupyter-notebook-beginner-guide.readthedocs.io/en/latest/

Using a remote service

Alternatively you can use GESIS Binder (https://notebooks.gesis.org/binder/). It offers a free jupyter notebook server but a temporary one. So any change you do will disappear when temporary notebook server is shut down.

To start your server, click on https://notebooks.gesis.org/binder/v2/gh/gesiscss/intro_to_python_preparation/master, wait a few seconds, and then you will be redirected to your temporary notebook server, where you are welcomed by the standard notebook user interface.

Once you have your Jupyter Notebook running

Here are 2 helpful videos explaining how to use Jupyter Notebooks:

- https://www.youtube.com/watch?v=jZ952vChhuI
- https://www.youtube.com/watch?v=HW29067qVWk

Download the **00_preparation.ipynb** file which you should get along with this pdf. If you are using your own computer, you have to move **00_preparation.ipynb** notebook file into the directory where your notebook server is running. If you are using GESIS Binder, **00_preparation.ipynb** notebook file will already be there.

To be prepared for the course, please open the **00_preparation.ipynb** notebook and get acquainted with the browser-based environment.

In case of questions or clarifications, you can contact us at:

- Kenan (Kenan.Erdogan@gesis.org)
- Indira (Indira.Sen@gesis.org)

Workshop: „Introduction to Python“

Schedule

Tuesday, 01.10.	Foundations of Python
9:30-9:45	*Welcome & Overview*
09:45-10:45	Lecture: Introduction to the Python Data Science Stack and Jupyter Notebooks
10:45:11:00	*Break*
11:00-11:50	Interactive Lecture: Introduction to Python & Basic Concepts
11:50-12:00	*Break*
12:00-13:00	Interactive Lecture: Introduction to Python & Basic Concepts
13:00-14:00	*Lunch*
14:00-14:50	Interactive Lecture: Introduction to Python & Basic Concepts
14:50-15:00	*Break*
15:00-16:00	Interactive Lecture: Introduction to Python & Basic Concepts
16:00-16:15	*Break*
16:15-17:30	Interactive Lecture: Introduction to Python & Basic Concepts
Wednesday, 02.10.	Data Exploration
09:30-10:20	Interactive Lecture: Introduction to Python & Basic Concepts
10:20-10:30	*Break*
10:30-11:30	Interactive Lecture: Introduction to Python & Basic Concepts
11:30-11:40	*Break*
11:40-13:00	Interactive Lecture: Data Exploration and Preprocessing with Pandas
13:00-14:00	*Lunch*
14:00-15:45	Interactive Lecture: Data Exploration and Preprocessing with Pandas
15:45-16:00	*Break*
16:00-17:30	Exercise: Data Exploration and Preprocessing with Pandas