

Applied Data Science with Python for Beginners

Objective

Data analysis plays a critical role in a wide range of academic disciplines and the Python programming language has become one of the standard tools within the Data Science community. This online course will introduce programming with Python in general and how to use it for data analysis.

After the successful completion of this course, you will be able

- to understand the fundamentals of the Python programming language,
- do basic data analysis in form of data wrangling,
- visualization of data and applying simple statistical models to the data.

Our goal is to show you the scope of possibilities within Python and leave you with the impression that you can confidently implement your own empirical projects in Python.

Description

This online course is aimed at beginners. Hence, we will cover the fundamentals of programming and Python before we dive into the topic of Data Science. We will not cover deeper statistical/theoretical concepts in this course, as the focus will lie on the coding part. What you will learn:

- Syntax and basics of Python and how to use Jupyter Notebooks as a coding environment
- Data analysis, data wrangling and data visualization using numpy, pandas and matplotlib
- Intro on how to use simple statistical models in Python using scikit-learn

Methodology

- Lectures and small exercises during the class
- Homework to deepen the discussed topics

Conditions

- No prior coding experience needed. If you already did some programming, keep in mind that especially the beginning of this course could be redundant for you as it is aimed at programming beginners.
- A Google Account to work with Google Colab as a simple and already set up development environment. Alternative: a locally installed Jupyter Notebook environment. Due to time constraints, we will not go through the installation and setup – that's why we highly encourage the use of Google Colab.

Organizational Information

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| Language | English |
| Target group | Doctoral Candidates at all stages and Postdocs from all faculties |
| Date | Tuesday, 27 April, 4 May & 11 May 2021, 18:00 – 19:30 |
| Registration | For registration click here |

Trainer



Felix Schneider,
M.Sc. Physics)

Felix Schneider trained more than one hundred students in Python through the TechAcademy program at Goethe University. Additionally, he has been programming in Python in several Data Science roles in the industry and is currently a working-student in the AI-Foundation team at SAP.