

Transforming and Visualizing Data with Python *

Learn how to accelerate your data analyses using Pandas and Plotnine, two Python libraries specifically designed for transforming and visualizing small to medium-sized data sets. Together with JupyterLab it enables a convenient environment for interactive data analysis.

During this workshop you are going to have a close look at Plotnine, a Python package based on the widely used R package ggplot2. Plotnine implements the so-called grammar of graphics. Its concise and consistent syntax allows you to create high-quality data visualisations in a quick and iterative manner that is suitable for both exploration and communication.

By the end of this workshop, you will understand the fundamentals of Pandas and be ready to perform your own analyses, You'll also have a solid understanding of the grammar of graphics and how to create data visualisations in Python for your daily work.

Content

- Load data from text files, spreadsheets, databases, & APIs
- Performing advanced joins and merges
- Generating insightful pivot tables
- Transforming data between wide and long formats
- Master the fundamentals of data visualization and their use in the grammar of graphics
- Learn the kinds of visualisations that are applicable for each data type
- Explore bar charts, line plots, scatter plots, histograms, and boxplots.

*This workshop cannot be credited as a qualification measure at the Faculty of Mechanical Engineering. Nevertheless, participation is open to all doctoral candidates.

