Processing and Visualising Data

Course Syllabus

Course leader

Janusz Stal

1. Course details

No of hours: **25**

Field of study : Informatyka Stosowana

Semester: 6

2. Course leader

Prof. UEK dr hab. Janusz Stal

Room: library building, room 438

Email: https://e-uczelnia.uek.krakow.pl/mod/page/view.php?id=455578

3. Course description

Based on the provided and imported data, students learn methods and techniques for data processing, such as extraction, aggregation, selection, grouping, combining, and indexing to become familiar with technologies in use. Data manipulation will be performed using Python Pandas. Next, the processed data will be presented in graphical form along with interactive data visualization methods. Finally, the learned methods and techniques of data processing and visualization will be compared with those available in Microsoft Excel. At the end of the course, students will pursue their own project to process and visualise some real data.

4. List of Issues

Temat
Introductory classes
Document formats and importing datasets
Data processing. Selecting, indexing and data aggregation.
Methods and types of data visualisation.
Comparison of data processing and visualisation in Python and Excel.
Practical final project.
Project assessment
Project assessment

5. Class materials

McKinney Wes, Python for Data Analysis, Third Edition, O'Reilly, https://wesmckinney.com/book/

Python Panda Documentation, https://pandas.pydata.org/pandas-docs/stable/index.html

6. Assessment rules

6.1. Conditions for completing the course

Activity name	Description	Points
Attendance	Attendance during classes	0 – 10
Final Project	Implementation of a group project	0 – 10

ATTENTION! The student must obtain a minimum of 50% of points in each activity to pass the course.

6.2. Grading scale

No of Points	Grade
≥ 18	bardzo dobry
≥ 16	+ dobry
≥ 14	dobry
≥ 12	+ dostateczny
≥ 10	Dostateczny
poniżej 10	Niedostateczny