Data science

Chapter 0 – Teaching and learning arrangements

2025-2026

Learning goals

The student

- dissects data from structured or unstructured (open) data sources;
- devises a method to convert data into a format suitable for further analysis;
- examines data to determine its most defining characteristics;
- concludes and advises based on in-depth analysis.

Classes and lecturers

- Lecturers:
  - Jochen Mariën jochen.marien@thomasmore.be

- Teacher at Thomas More University College since 2009
- Located in Belgium
- Teaching Python, Java, Data Science, Machine Learning

Course evaluation

- Option 1: certificate of attendance
  - You are present during all classes
  - You complete the exercises to the best of your abilities
  - You get a certificate of attendance
- Option 2: Graded project
  - Do a project in a group of maximum 4 people
  - Can be worked on during the classes, but requires additional work outside of these hours
  - Submission through a github repository
  - Results are presented for all students during the final session

Course schedule

- Session 1: 19 February
  - Setting up a working environment
  - Regex and scraping
  - Submission: chosen dataset
- Session 2: 26 February
  - Numpy and matplotlib
  - Submission: Dataset loaded and cleaned
- Session 3: 5 March
  - Pandas
  - Submission: Analysis of dataset and conclusions
- Session 4: 19 March
  - Final presentations of projects

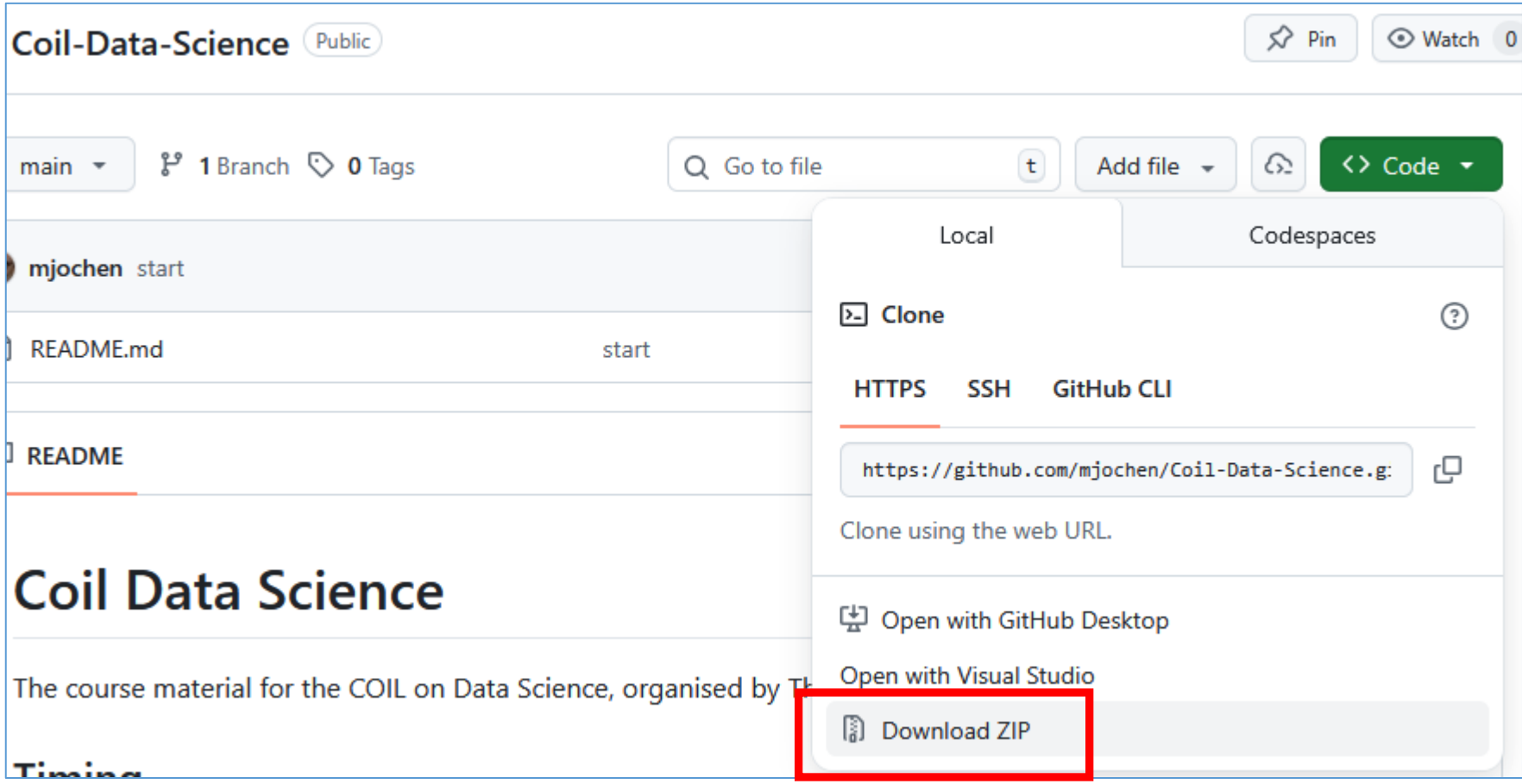
Course material on Github

- Will be updated as we go along!
- Presentations
  - Contain all you need for the exercises and the project
- Exercises
  - Solutions are not published but discussed later on
- Individual project assignment

- E-book
  - https://jakevdp.github.io/PythonDataScienceHandbook/
  - Chapters 1 – 4, chapter 5 is interesting but out of scope
  - Not mandatory reading, for support purposes only

Course material on Github

- You can fork the repo
- Or simply download the zip-file
  - It contains al necessary files



AI usage

- In this course, AI usage is permitted
  - You can, and are encouraged to, use chatGPT, gemini, copilot, ...
- But use it correctly!
  - Don’t ask for solutions and copy them without reading them
  - Use it as a teaching assistant that you can ask for guidance
  - If the AI generates code that you don’t understand, ask him/her/it to explain what is going on
- And always be critical of what you are running