Data Science – Exercise 0

St.Gallen, 17. September 2024
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From insight to impact.

Agenda

1. Introduction
   - Self-Introduction of Thomas
   - Exercises
     - Exercise session structure
     - Exercise sheets / notebooks
2. Exercise 0
3. Exercise 1 (covering Lecture 1)
   - Overview
   - Additional tasks?

University of St.Gallen
Institute of Computer Science

Introduction

Self-Introduction of Thomas

Research Interests:

- Argumentation
    - Argument Mining
    - Argument Generation
    - Argument Quality Assessment
- Reinforcement Learning
- Language Models
- Making (L)LMs overall / the training more efficient

Working on:

- SNF Project: Argumentation Chatbot
    - Automatic Evaluation of Argument Quality
    - Argument Feedback
        - Both Generation and Following
    - Generation of own arguments
- Shifting (L)LM Evaluation Paradigms

Exercise session structure

- 90 minutes in total for each session
  - 45 minutes, then 15 minutes break, then another 45 minutes
  - Break can be moved if a majority wants that
  - Start is at 16:15
  - Room is 61-152 for all sessions
    - In case this changes, there will be an announcement on Canvas (and during the Exercise if I already know about the change early enough)
  - If you have any questions at any time, feel free to ask!
    - You can of course also send an E-Mail if questions come up after the exercises
    - Or come to my office (Rosenbergstrasse 30 [this building], room 61-544)
  - For some exercises/tasks we will do group activities (in class)
    - "Split into pairs, and discuss"
    - "Form X groups, then form new groups such that one member of each original group is in the new group (jigsaw activity)
    - ...

Exercise sheets

- Each week there will be an Exercise sheet
  - It will be published one week before the exercise session where it is discussed
    - Today (in Session 0) the exercise sheet for next week (Session 1) will be posted on Canvas
  - In class we will discuss the solution of the Exercise Sheet of that week (in other words: next week we will discuss Exercise 01, which is published today)
- The Exercise sheet covers the topics of that week of the lecture
  - The Exercise sheets will be Jupyter Notebooks
    - You can run them locally or on Google Colab
      - If you have never worked with Jupyter Notebooks before then Google Colab is the easiest way to get started
      - If you have any Python IDE installed then there is a high chance it also supports Jupyter Notebooks
        - PyCharm supports them for sure and you should be able to get the Pro version with your University account

Exercise 0

Exercise 0

- Download the notebook from Canvas and run it
  - Depending on your setup you may need to install the depencies from requirements.txt
- We will use the pandas library a lot, and not everyone may be familiar with it (or you may not have used it for a while) so we will do a pandas tutorial in this first exercise session
  - You don't have to use it to solve the exercises, but the solutions will use it

Exercise 1

Exercise 1 - Preview

- The exercise for next week will be uploaded immediately after the exercise session (or is already uploaded)
- It covers Week 1 of the lecture
  - Exercises are "shifted" by one week to give you time to solve them on your own
    - In other words: We discuss the Exercise paired with Lecture 1 in Week 2 (this is Exercise Sheet 1!)
- We will go over the notebook file directly
  - Is there anything from the lecture that you want to know more about / that you want to have an exercise about?
  - If there is, just let us know!
  - The exercise file may be updated to include additional tasks (in that case there will be an announcement on Canvas)
    - i.e. we might do an additional exercise/discussion/jigsaw activity between Task 1 and Task 2 in the notebook during the exercise session

Questions?
Feedback?
Anything else?

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