DA380A: Machine Learning
Seminar 1: Regression Models

The purpose of the seminar is to learn how to (a) build, (b) analyze, and (c) evaluate regression-type ML-models. You are required to complete this assignment and upload your work on Canvas a few days before the seminar.

Your tasks:

- Explore one of the provided datasets and visualize interesting relationships and,
- Build at least **three** different regression-based ML models used for making predictions on the dataset you chose.
- The predicted output depends on the dataset of your choice.
- Analyze each of your ML models to answer the following questions:
  - What is the Mean Absolute Percentage Error (MAPE) of each model? Which of the models do you recommend and why?
  - Rank the dataset features in the order of their importance or predictive power.
- Document your Jupyter notebook properly so that your peers can understand your work. It is recommended that the code you write in each cell is preceded by comments that explain what the specific code does.
- Upload your work before the deadline so that your peers have time to take a look into your work.
- During the seminar session,
  - explain your solution to your peer groups.
  - After reading your peers' works, challenge them about their solutions and compare their results with yours. Is there substantial difference? If yes/no, explain why that is the case.
  - <u>Be prepared to answer or give proper explanation for questions from your peers or from the teacher.</u>