

Explainable AI – Exercise Sheet 1

October 21st, 2024

Exercise 1 - Intro AI

1. Find 2 examples (not mentioned in the lecture) where AI outperformed humans and describe them shortly.
2. Find 2 examples (not presented in the lecture) where AI was harmful and describe them shortly.
3. Name 3 interpretable models and 3 black-box models.

Exercise 2 - Practical Exercise

4. **[Machine Learning Basic]** In this exercise, we will practice applying machine learning to two types of datasets: tabular and image datasets. The details are in the Jupyter notebook file. First, please follow the instructions to install the necessary software and set up the environment to be able to run the notebook file:

Setup Instructions:

- A. Install Anaconda and set up Conda: <https://conda.io/projects/conda/en/latest/user-guide/getting-started.html>
- B. Download week_1.zip, unzip file, navigate to the "practical-exercise" folder.
- C. Create an environment by executing the command "conda env create -f environment.yml" (without the double quotes).
- D. Activate the environment by executing the command "conda activate xai" (without the double quotes).
- E. Launch Jupyter Lab by executing the command "jupyter-lab" (without the double quotes).
- F. Open Week_1_exercise.ipynb and do the exercises.

Note: Please read the instructions and requirements of each practical exercise carefully.