

Explainable AI – Exercise Sheet 3

Sample Solutions

November 11th, 2024

Exercise 1 - Theoretical Exercise

1. What are the differences between global explanations and local explanations?
2. Compare Permutation-based explanations and Occlusion-Based Explanations.
3. Describe LIME in your own words.

Exercise 2 - Practical Exercise

4. In this exercise, we will practice the Occlusion technique and LIME on MNIST data. If you have already completed the exercise in the first week, you can reuse your own model (or your own code). To save or load your model, consider using **Python's Pickle** as a good option. We will continue using the "xai" environment created in the first week. If you missed the first week, please revisit the Environment Setup Instructions from the first-week exercise.

To run the notebook for this week, follow the steps (similar to the first week):

- A. Activate the "xai" environment by executing the command "conda activate xai" (without the double quotes).
- B. Navigate to the "practical-exercise" folder.
- C. Launch Jupyter Lab by executing the command "jupyter-lab" (without the double quotes).
- D. Open the Week_3_exercise.ipynb file and complete the exercises.