IIS - Assignment 2 Report

Nima Dehghanian & Axel Gleisner

November 29, 2024

• Train/val/test split percentage: 85/10/05

• Selected model(s): MLP

• Hyperparamter tuning or model selection: Hyperparameter tuning.

• Parameters that were tuned and range of values:
We made a list containing all values we wanted to test for any given parameter and ran the training with all combinations to determine the best configuration.

- Layer configuration:

$$\begin{bmatrix} [100, 50] \\ [200, 100, 50] \\ [300, 200, 100, 50] \end{bmatrix}$$

Each row represents a layer configuration, where each element is a layer with its corresponding amount of neurons. I.e., for the first row, there are three layers: [20, 100], [100, 50], [50, 7].

- Dropout rate: [0.1, 0.3, 0.5, 0.7]

- Learning rate: [0.001, 0.01, 0.5, 0.1]

- Number of epochs: [50, 100, 150, 200]

• Best model/hyperparameter:

Layer configuration: [100, 50]

Dropout rate: 0.1 Learning rate: 0.01 Number of epochs: 50

• Performance of best model on test set (accuracy): $\sim 55\%$

• Contributions: We exclusively worked in tandem on VSCode LiveShare. This report was written in a similar manner in Overleaf.