Christodoulou Dimitrios: 2113

Karamellios Sotirios: 2237

For our implementation, a Bidirectional LSTM model has been developed. The RMSprop optimizer is used. The cost function used for the compilation is the mean absolute error function. Finally, to prevent the model from overfitting, early stopping is being used.

The model has been trained with random hyperparameters. To be more precise, 100 different models are generated with different parameters and the model that minimizes the loss is selected for the testing stage. Also, hyperparameters are being assigned from a specified range.

From the training and testing set, the initial hex addresses are converted to decimal values in order to be easier to compare them. After that, the data is being normalized for the acceleration of the training of the model. From a variety of scalers, the Robust scaler is selected since using this scaler the generated models have smaller loss values.

The best predicted memory addresses for the given database are being displayed in the excel file that is attached. From the results, it can be noticed that the predicted addresses have small difference as a result we can conclude that the memory addresses are in a specific memory area (are in the same neighborhood).