Replication

This guide gives information on how to replicate the results claimed in the report.

cnn_classification.py

To obtain the metric scores for the model, simply run the file. Once the program has completed the set number of training and testing loops (configured via the NUM_RUNS variable), the program upon completion of these loops will output the average metric scores to the console. These results can then be used for comparison.

As is discussed in manual.pdf, the dataset can also be changed on line 52.

br_classification.py

To obtain the metric scores for the model, simply run the file. Once the program has completed the set number of training and testing loops, the program upon completion of these loops will output the average metric scores. These results can then be used for comparison with cnn_classification.py.

cnn_optimiser.py

To obtain the optimum hyperparameter configurations for the model, simply run the file. Once the program has completed the set number of trials, the best-performing trial will be outputted to the console, along with the values which were used for each hyperparameter. For reference, the results of each trial are also stored in optuna_hyperparameter_results.csv.

As explained in manual.pdf, modifications can be made to the program if you only wish to sample how the program works.