

ME4 Machine Learning Coursework - Yousef Nami (yn2217)

1 Model 1

The model for dataset 1 achieved 91.6% accuracy with an unreleased validation dataset. The best achieved score by any student for this model with the validation set was 91.9%. When using the released 'training' dataset, the accuracy is 93.5%. The 1.9% difference between training and validation data for this case indicates minimal levels of overfitting. It is possible to have a smaller model - you used 290 parameters in total, across 3 layers. You can get good results with fewer than 50 for this dataset. Overall for dataset 1, an OK performance.

2 Model 2

For dataset 2 a lower accuracy was achieved (88.2%) with the validation dataset (but this problem is more challenging). For reference, the best achieved with this model was 88.2%. Your model achieves 90.5% with the dataset provided, giving a discrepancy of 2.4%. This is good matching for this data, so overfitting is low. You used 586 parameters in 8 layers, which is a concise model. For dataset 2, overall your model demonstrated a strong performance.

3 Grades

Grades for different sections are given in the table below.

Conciseness of model 1	C+
Performance of model 1	A
Conciseness of model 2	B+
Performance of model 2	A
Implementation	A
Overall	A

4 General notes

The performance score combines the fraction of correct values on the unseen validation dataset with an assessment of the variance, i.e. the extent to which the performance varies moving from the given training dataset to the unseen validation set. It is not purely a measure of the performance on the validation set.