

Master Project (MSc Online/Tutored E-Learning)
School of Computer Science

Project Management Log number: 6

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Supervisor Name	Giseli De Sousa
Project Title	Closed-Domain Intention Classification with Supervised Learning Methods
Project Management Tool	GitHub

Since the last contact point, I have completed building models, augmented my data, and started work on my final report:

The screenshot shows a Trello board with three columns: 'Minimum', 'FPR, Viva & FDV', and 'Finished'. Each column contains a list of tasks, each with a title, a number, and a status indicator (e.g., 'opened by Colin-Young').

- Minimum Column:**
 - Generate validation test set (November) #37 opened by Colin-Young
 - figure out how to check performance against the test set #56 opened by Colin-Young
 - Oversampling #52 opened by Colin-Young
 - Apply Data augmentation #30 opened by Colin-Young
 - Implement cross validation for Keras #40 opened by Colin-Young
 - Generalise NN creation modules #53 opened by Colin-Young
- FPR, Viva & FDV Column:**
 - Adapt existing write-ups for use in final report #59 opened by Colin-Young
 - Abstract #58 opened by Colin-Young
 - Structure the final report #57 opened by Colin-Young
 - Resources #51 opened by Colin-Young
 - Report writing #5 opened by Colin-Young (Final Deadline)
 - Literature review #3 opened by Colin-Young (Contact Point 3)
 - Evaluation #29 opened by Colin-Young
 - Evaluation of models #26 opened by Colin-Young
 - Justify using data augmentation to balance dataset #36 opened by Colin-Young
 - Investigate the individual libraries and methods used #50 opened by Colin-Young
- Finished Column:**
 - GRU model #46 opened by Colin-Young
 - LSTM model #47 opened by Colin-Young
 - calculate Certainty of KNN predictions #33 opened by Colin-Young
 - K-Nearest neighbours #24 opened by Colin-Young
 - RNN model #25 opened by Colin-Young

I have been working on a generalized approach to my software development as demonstrated below:

```
experiments = []
#experiments.append(Experiment(_modelType="LSTM", _kFolds=5, _embeddedDims=300, _epochs=1, _batchSize = 32, _sentenceSize=20, _trainFilePath='data/trainingset_augmented.csv', _testFilePath='data/trainingset_augmented.csv'))
#experiments.append(Experiment(_modelType="KNN", _kFolds=5, _nNeighbours=5, _trainFilePath='data/trainingset_augmented.csv', _testFilePath='data/trainingset_augmented.csv'))
experiments.append(Experiment("RNN", _kFolds=0.3, _embeddedDims=300, _epochs=2, _batchSize = 32, _sentenceSize=20, _trainFilePath='data/trainingset_augmented.csv', _testFilePath='data/trainingset_augmented.csv'))
experiments.append(Experiment("KNN", _kFolds=0.3, _nNeighbours=5, _trainFilePath='data/trainingset_augmented.csv', _testFilePath='data/trainingset_augmented.csv'))

testRun = Experiments(experiments)
testRun.run()
testRun.evaluate()
```

This will help with remaining optimization of hyperparameters.