COMP3411/9814 25T1 Assignment 2 Marking Scheme

Assessment for this assignment is mainly subjective marking (Part A does have an automarked component). Subjective marking is your assessment, given these guidelines, based on reading the submitted reports and code files. Please consider providing some feedback for each student submission using the commenting facility in `xmark`.

Part A.

Training and validation set performance [3 marks]

For this, and the next section, you will need to refer to the report. Marks will be gained by clearly showing the results and providing reasonable commentary. Marks will be lost by simply describing the results without demonstrating any interpretation (only describing "what happened" without any argument about "why this happened").

(i) a learning curve plot by epochs for classifier training: no mark if plot does not have correctly labelled axes, or if plot does not show expected increase in accuracy over epochs **[1 mark]**

(ii) a correctly plotted and labelled two-class confusion matrix: no mark if this is not correctly shown **[1 mark]**

(iii) the commentary can relate to: the model improves performance over epochs, i.e., it learns, and anything the student highlights in implementation that they believe helped **[0.5 mark]**; anything on the highly skewed class ratio (only approximately 13.9% positive class examples) meaning that absolute accuracy is misleading – e.g., there could be a sentence with some discussion about reducing false negative errors being necessary to improve accuracy, etc. **[0.5 mark]**

Answers to Questions A1 and A2 [3 marks]

(A1) the answer describes and justifies network architecture and parameter selection, mentions experimentation during implementation (possibly using a structured approach such as neural architecture search), and overall displays clear understanding of network configuration choices and possible effects of parameter choice on learning **[2 marks]**

(A2) the student should observe and report that performance without scaling is clearly lower **[0.5 mark]**; in addition they should have checked the input data and observed the difference in value ranges across the variables, which suggests the need for scaling **[0.5 mark]**