

## COMP24111 Examination Performance Feedback (AY2019-2020)

### Sections A and B

For multiple choice questions, the average mark is around 78.9% with a standard deviation around 11.8%. Among these questions, there are 16 questions that over 80% students answered correctly, 7 questions that 30%-80% students answered correctly, while one question that less than 30% students answered correctly. This suggests that most students well understood those essential concepts and knowledge delivered in this CU.

### Section C

Question 1 was answered fairly ok, with an average around 10.6 out of 18 (59%). Most students were able to write down the formulation of the required linear model, set the target output for classification, write down the sum-of-squares error function and derive its partial derivative, and derive the optimal model weights. However, many students neglected to provide the classification decision function building upon the linear model. Also, the part on how to apply the stochastic gradient descent knowledge to train the classifier can be improved.

Question 2 was answered well with an average around 5.8 out of 8 (73%). Among the attempted answers, most students show good understanding of the k-NN regression. However, a few students did not read the questions carefully, but instead provided answers for k-NN classification. Some answers on addressing the advantages and disadvantages of k-NN are not very rigorous.

Question 3 was answered fairly ok with an average around 2.0 out of 4 (50%). Many students did not see the sign of [Next page →] and missed this question. Among the attempted answers, more than 50% managed to provide satisfactory answers, showing good understanding of gradient based optimisation approach.

In general, the performance in this section suggests that most students are able to master the essential knowledge of machine learning algorithms but some lack deep understanding and certain mathematical skills, a goal set for only those exceptional top-tier students.