

COMP4702/7703
Machine Learning

Deferred/Supplementary Examination
Semester 1, 2022

This exam has a single task which should be completed. Intentionally, there is considerable flexibility in how you choose to complete this task.

Submission: Your answer for this exam should be uploaded as a pdf file via the Turnitin submission link provided.

Task (20 marks)

In the Practical classes for this course, you have implemented and/or applied a range of different machine learning techniques/models/algorithms. For this exam, you are required to demonstrate your understanding of and your ability to apply one or more of these machine learning techniques to a dataset provided for use in this exam. Your task is to create a report that describes your method, results and analysis, including graphs and plots, code and output. Screenshots are also fine.

Key points:

- It is understood that you have limited time to complete the exam which limits the amount of work that you can do. That said, knowing about the exam question in advance means that you can plan and prepare your approach.
- You can use any code that you developed during the course (e.g. while completing pracs and homework), as well as built-in Matlab, python functions/libraries and software used in the course such as WEKA and Netica. If you use other libraries then you must reference them and they must be publicly available.
- Explain the key steps of your analysis (data preprocessing, training, testing, visualization, etc.).
- Present any results and output from your work. Add comments and discussion to demonstrate that you understand the results and output.
- Don't spend time introducing general background concepts or describing the theory of models from the course. However, if you can relate your analysis and results back to the concepts and theory from the course then that will be a positive for your marks.
- Make sure your work is understandable and readable but don't spend a lot of time making the presentation neat and polished.
- Please specify any assumptions you have made in completing this examination and which part of the exam those assumptions relate to. You may also include queries you may have made, should you have been able to 'raise your hand' in an examination room.

The dataset to be used for the exam is:

https://learn.uq.edu.au/bbcswebdav/xid-44965015_1