CMP9137M Advanced Machine Learning, Assessment Item 1

Learning Outcome	Criterion	Pass	Merit	Distinction
LO3 Use machine learning software to solve complex real-world problems in an application domain of interest.	Provide a software solution to the given real-world tasks. **(40%)**	A set of classifiers and reinforcement learning agents is provided, which can be applied to the test data. The trained models solve part of the proposed tasks. However, the performance results are considered as low.	A set of classifiers and reinforcement learning agents is provided, which can be applied to the test data. The trained models solve the proposed tasks, mostly. The performance results are acceptable (medium to high) but could still be improved to achieve higher results.	A well-chosen set of classifiers and reinforcement learning agents is provided, which can be applied to the test data. The performance results are high in comparison to previous works. Even when the results might not (very) high, they show ambition or promise in the proposed solutions.
[LO1] Critically appraise a range of machine learning techniques, identifying their strengths and weaknesses, and electing appropriate methods to serve particular roles. [LO2] Analyse the "state of the art" in machine learning, including an understanding of current applications.	Discuss, compare and justify the process undertaken to achieve the solution, and the choices made. This is within a written report. **(60%)**	A report is provided. The report contains a basic discussion of the selection of machine learning techniques to create the submitted models, with no/limited convincing justification for this decision. Some attempts to support the discussion with references from literature.	A well-structured and organised report is provided. The report contains a logical and non-trivial discussion of the selection of machine learning tools to create the final models. There is convincing justification regarding the decisions and choices made, which are supported by relevant references from academic literature.	A well written, well organised and crafted report is provided. The report presents a very logical and convincing discussion of the selection of machine learning tools to create the trained models. The justification of the choices made demonstrates very good understanding of Machine Learning and a range of their techniques. The report is supported by a relevant set of academic references, which have been appropriately cited.
Weighting	All criteria in this assessment are weighted as indicated above			