CMP9137M 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 problem. **(40%)**	A set of classifiers is provided (Python code), which can be applied to the test data. The trained classifiers solve part of the proposed problem. However, the classification results may be very low.	A set of classifiers is provided (Python code), which can be applied to the test data. The trained classifiers solve the proposed problem, mostly. The classification results are acceptable (medium to high) but could still be reasonably improved to achieve higher results.	A well-chosen set of classifiers is provided (Python code), which can be applied to the test data. The trained classifier fully solves the proposed problem. The classification results are very high.
[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 classifiers, probably with no/limited convincing justification for this decision. Some attempts to support the discussion with references from literature.	A good 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 classifier. There is convincing justification of the decisions and choices, ideally supported by strong and relevant references from academic literature.	An excellent and 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 final classifier. The justification of the decisions and choices demonstrates good understanding and appreciation of Machine Learning and a range of their techniques. The report is supported by strong and relevant set of references from academic literature that have been accurately and appropriately cited.
Weighting	All criteria in this assessment are weighted as indicated above			