

## **CETM26 - Machine Learning and Data Mining - As1**

Criterion	40% - 49%	50% - 59%	60% - 69%	70% - 79%	80+%
Overview of problem task, outlining of architecture(s) (15%)	A brief overview of the problem task is provided.  Some details provided regarding a single neural network model written using Keras; this may be incomplete and/or erroneous	In addition to previous.  Definition of a single neural network model is complete and without error.  Definition of Task is complete and without error.	In addition to previous.  Multiple Neural Network experiments are defined with some rationale provided; however, this may contain some error.	In addition to previous.  Multiple Neural Network experiments are well-defined, with their differences clearly stated. Rationale provided is error-free, and relates to both theoretical knowledge and empirical processes.	In addition to previous.  Extensive range of experiments defined methodically in-line with academic literature techniques.
Presentation of results, and any accompanying figures. (20%)	A basic results section is presented. This may cover basic accuracy of a singular model and may contain some error.	In addition to previous.  Single Model classification accuracy is presented without error.  Additional Model metrics may be attempted.	In addition to previous.  Multiple models are evaluated, with TP, TN, FP, FN metrics.  Additional figures and/or tables may be present.	In addition to previous.  Results table(s) provided, enabling comparison of network approaches to a baseline.  Confusion Matrices are generated and provided  Additional figures may be provided to provide rationale to other sections of the report.	In addition to previous.  Results are presented excellently, making good use of the appendix for additional entries, and is without error.  Additional fit-for-purpose metrics are reported, with results table(s) expanded to additionally include different input feature sets for each model.



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Critical evaluation of presented results and evaluative methodology  (40%)	Evaluation of results is attempted, but may be limited in scope and/or not cover all aspects of presented results.	Results are interpreted correctly in the context of the assignment.  No evaluative methodology is presented/attempted.	In addition to previous.  An evaluative methodology is presented, but may be brief, limited, missing steps, or contain some error.  Results are interpreted and related back to the architectural choices made by means of a comparison between models.	In addition to previous.  An evaluative methodology is outlined and explained well, making use of advanced concepts for establishing reliability in results provided, and is error-free.  Results are thoroughly and critically evaluated, making reference to several advanced evaluative metrics.	In addition to previous.  Academic literature is consulted for the presentation of a viable evaluative methodology, with excellent rationale for its choice with brief considerations of alternatives.		
Discussion of key findings and future works (25%)	A limited discussion is presented and may be erroneous in places.	Discussion appropriately summarises the key findings of the evaluative section, with some linking back to the problem.  No future works are discussed or presented.	Discussion summarises key findings, and makes comment on comparisons between architectures; some reflection is attempted.  Future works are briefly considered.	Discussion summarises key findings, and thoroughly covers comparisons between architectures; critically reflecting on this choice and comparison.  Future works are fully considered, with good rationale linking back to the findings of the assignment.	In addition to previous.  Discussion relates key findings and interesting observations back to both the task and literature as a whole, identifying research-aligned goals and techniques to investigate for future works. This includes how the challenges faced in this assignment relate to those faced in wider literature.		
Weighting	All criteria are weighted as shown by the percentages indicated in the relevant criterion box.						