CAB420: Machine Learning
Assignment 1B Rubric

Criteria	5 out of 5	4 out of 5	3 out of 5	2 out of 5	Less than 2 out of 5
C1. **Q1 Model Development and Design** **/5**	Clearly and concisely presents the proposed approach, with clear and well-reasoned justification for design choices that considers all relevant factors.	Proposed approach clearly presented with sound justification that considers most relevant factors.	Proposed approach presented with basic justification that considers some relevant factors.	Propose approach poorly presented, and/or does not fully address the question. Limited/incorrect justification for approach.	Flawed model development approach, with no clear justification.
C2. **Q1 Discussion of Computational Considerations** **/5**	Insightful and concise discussion that considers the computational requirements of the models and how requirements vary with changes in model design. Discussion identifies any hardware limitations and discusses how these impact design decisions.	Sound discussion of computational requirements and how design changes impact requirements. Discussion identifies any hardware limitations and discusses how these impact design decisions.	Basis discussion of computational requirements, highlighting major considerations but lacking details.	Limited discussion of computational requirements, lacking detail specific to the chosen approach and available hardware.	Flawed/missing discussion of computational requirements.
C3. **Q1 Analysis of Results** **/5**	Excellent and insightful analysis of results and run-times, drawing on theoretical knowledge of the models and relevant characteristics of the data. Analysis is supported and enhanced by appropriate metrics and/or figures.	Sound analysis of results and run-times, relating key theoretical knowledge to observed results. Appropriate metrics and/or figures present and used to enhance discussion.	Provides basic analysis of results and run-times, with limited theoretical insights. Appropriate metrics and/or figures present.	Limited and/or superficial analysis of results and run-times. Weak/incorrect discussion of theoretical knowledge in relation to results. Poor use of metrics and/or figures.	Flawed analysis. No discussion relating theoretical knowledge to observed results, and/or missing analysis of run-times. Incorrect and/or inappropriate use of metrics and/or figures.
C4. **Q2 Discussion of Data Characteristics and Pre-processing**	Clear and concise discussion of data characteristics and pre-processing. Pre-processing (or lack of) is	Discussion and justification of data and pre-processing (or lack of) considers most issues relating to the nature of	Basic discussion and justification of data and pre-processing (or lack of) considers some issues relating to the	Discussion present but fails to consider major issues. Pre-processing inappropriate and/or unjustified.	Failure to consider relevant characteristics in the data. Pre-processing not considered or incorrect.

/5	justified and considers all issues relating to the nature of the problem and the models selected.	the problem and the models selected.	nature of the problem and the models selected.		
C5. **Q2 Model Development** /5	Clearly and concisely describes the developed model. Clear and correct justification for approach, supported by figures/tables as/when appropriate. Appropriate and well justified use of data for model training and development.	Developed models are presented and justified with partial support by figures/tables as/when appropriate. Appropriate use of data for model training and development.	Provides basic justification for the developed model, with limited/no support from figures and/or tables. Appropriate use of data for model training and development.	Weak model development approach. Limited/incorrect justification approach. Poor use of data for model training and development.	Flawed model development approach, with no clear justification, and/or incorrect use of data.
C6. **Q2 Analysis of Results** /5	Excellent and insightful analysis of results and performance, drawing on theoretical knowledge of the models and relevant characteristics of the data. Analysis is supported and enhanced by appropriate metrics and/or figures.	Sound analysis of results and performance, relating key theoretical knowledge to observed results. Appropriate metrics and/or figures present and used to enhance discussion.	Provides basic analysis, with limited theoretical insights. Appropriate metrics and/or figures present.	Limited and/or superficial analysis of results. Weak/incorrect discussion of theoretical knowledge in relation to results. Poor use of metrics and/or figures.	Flawed analysis. No discussion relating theoretical knowledge to observed results. Incorrect and/or inappropriate use of metrics and/or figures.
Assignment 1B Mark (out of 10) = ((0.125 x C1) + (0.125 x C2) + (0.25 x C3) + (0.1 x C4) + (0.2 x C5) + (0.2 x C6)) x (10/5)					