

## FIT5149 TP6 2021 Assignment 1 - Marking Rubric

**Marking Rubric - Assignment 1 contributes 20% to your final unit mark**

Indicating the level the student is work at*:	0 column	(N) Fail	(P) Pass	(C) Credit	(D) Distinction	(HD) High Distinction
<p>This assessment meets <b>Unit Learning Outcomes</b> 1,2,4,5</p> <ol style="list-style-type: none"> <li>1. Analyse data sets with a range of statistical, graphical and machine-learning tools;</li> <li>2. Evaluate the limitations, appropriateness and benefits of data analytics methods for given tasks;</li> <li>3. Design solutions to real-world problems with data analysis techniques;</li> <li>4. Assess the results of an analysis;</li> <li>5. Communicate the results of an analysis for both specific and broad audiences.</li> </ol>						
Total: 25 marks	Did not attempt	Poor	Limited	Some	Most	All
<b>Data exploration</b>	No or incomplete data exploration potentially without supporting	Incomplete descriptive exploration of variables with inappropriate plots and statistical methods.	Limited exploration of variables or analysis of findings with suitable plots and statistical methods.	Some exploration of variables and analysis of findings with suitable plots and statistical methods however the use of these	Clear and succinctly explores the variables (and analyses findings) with suitable plots and statistical methods.	A comprehensive and descriptive exploration of variables and analysis with suitable plots and statistical methods. The use of the plots/statistical

	plots or statistical methods	No justification for the association/interaction between variables.	The use of plots and statistical methods is poorly justified (if at all)	plots and methods is not well justified	The use of the plots/statistical methods are well justified however the exploration and analysis is not comprehensive.	<p>methods is well justified.</p> <p>To be comprehensive the exploration and analysis should:</p> <ol style="list-style-type: none"> <li>1. Justify the characteristics of variables, potential association/interaction between variables, and variable transformation using proper plots and diagnostics.</li> <li>2. Provide a comprehensive analysis of important findings, which demonstrates excellent data insight and high level of understanding of</li> </ol>
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						exploratory data analysis.
5 marks	0	0-2.5	2.5-3	3-3.5	3.5-4	4-5
<b>Model description and justification</b>	No attempt	No, or limited explanation of how the models were	Limited explanation of how the models were developed with	A fair explanation of how the models were developed with	A logical explanation of the model development	Clearly explained how the models were developed with

		developed with no evidence and proper justification.	insufficient evidence and proper justification.  The exploratory analysis and diagnostics does not logically lead to the development of the modes	some relevant supporting information and statistical diagnostics.  The exploratory analysis shows some connection to the development of the models	process with supporting information derived from exploratory data analysis.  The exploratory analysis and diagnostics logically lead to the development of the models however some points are not fully justified	sufficient supporting information derived from exploratory data analysis and proper statistical diagnostics.  The exploratory analysis and diagnostics logically lead to the development of the models (including
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						attribute/feature selection).
5 marks	0	0-2.5	2.5-3	3-3.5	3.5-4	4-5
<b>The quality of model comparison</b>	No comparison of the models	A limited comparison of the models with poor analysis and lack of details.	<p>Comparison of the models is limited.</p> <p>The description is without sufficient analytics and details.</p> <p>Demonstrates a limited understanding of the difference between the compared models</p>	<p>Some logical comparison of the models with sufficient statistical analysis and an appropriate level of details.</p> <p>Demonstrates some understanding of the difference between the compared models.</p>	<p>Comparison of the models with solid analysis and appropriate details to support the argument.</p> <p>Demonstrates a solid understanding of the difference between the compared models.</p>	<p>Critically assess the accuracy of the models with in-depth statistical analysis. The comparison is logical and solid with an appropriate level of details.</p> <p>Demonstrates a high-level of understanding of the differences (i.e., advantages and</p>

						disadvantages) between the models in regard to the task.
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5 marks	0	0-2.5	2.5-3	3-3.5	3.5-4	4-5
<b>Explanation of why the chosen subset of attributes have a significant impact on the prediction of the response variable</b>	No explanation	Limited justification of why a subset of attributes have a significant impact on the prediction and there is no statistical analysis to support their argument	Limited justification of why a subset of attributes have a significant impact on the prediction with insufficient statistical analysis and accompanying interpretation	Some Explanation of why a subset of attributes have a significant impact on the prediction with proper statistical analysis and accompanying interpretation, in line with the findings from the model development.	Good justification of why a subset of attributes have a significant impact on the prediction with sufficient and proper statistical analysis and interpretation, in line with the findings from the model development.	<p>The subset of attributes leading to the prediction are identified and clearly justified with in-depth statistical analysis.</p> <p>The description and accompanying interpretation are comprehensible and convincing, in line with the findings from the model development.</p>
5 marks	0	0-2.5	2.5-3	3-3.5	3.5-4	4-5
<b>The quality of the Jupyter notebook/ the R Markdown file, quality and</b>	The Jupyter Notebook	The Jupyter Notebook is unorganised with	The Jupyter Notebook is poorly organised with	The Jupyter Notebook is acceptably	The Jupyter Notebook is well structured with	The Jupyter Notebook is well structured in a logical order that

<b>readability of the R implementation</b>	<p>is messy and incomplete.</p> <p>No commenting of code</p>	<p>no evidence to support the development of the answers</p> <p>The R code is incomplete and the code readability is poor.</p>	<p>no or insufficient evidence to support the development of the answers</p> <p>The R code is complete but poorly structured and the code readability is poor with no or insufficient comments to explain how the code is intended to work.</p>	<p>structured with some evidence to support the development of the answers</p> <p>The R code is structured but the logic is not clear. Code readability is good with adequate comments to explain how the code is intended to work</p>	<p>sufficient evidence to support the development of the answers.</p> <p>The R code is logically structured and easy to read. Comments clearly explain how the code is intended to work. However, there are some redundant or unnecessary code and/or comments.</p>	<p>clearly supports the development of the answers.</p> <p>The R code is logically structured and easy to read.</p> <p>Concise but precise code comments clearly explain how the code is intended to work.</p> <p>The redundant or unnecessary code is excluded from the final submission.</p>
5 marks	0	0-2.5	2.5-3	3-3.5	3.5-4	4-5