FIT5197: Rubric for Assignment

Use this rubric to determine what you need to do in the assignment to get the highest marks. This assignment covers the lecture and tutorial material up to, and including, week 9 with a focus on:

- Maximum Likelihood Estimation
- Central Limit Theorem
- Confidence Interval
- Hypothesis testing
- Regression

This assignment is worth 35% of the final grade and addresses the following unit learning outcomes:

- Perform exploratory data analysis with descriptive statistics on given datasets.
- Construct models for inferential statistical analysis.
- Produce models for predictive statistical analysis.
- Perform fundamental random sampling, simulation and hypothesis testing for required scenarios.
- Implement a model for data analysis through programming and scripting.
- Interpret results for a variety of models.

Assignment component	Marks contribution	Lowest marks (approaching 0%)	Highest marks (approaching 100%)
Mathematical answers + simulation	50%	- Incorrect answer - Poor/no justification of steps/final answer - Little or no mathematical working out - Math not written in markdown	- Correct answer - Strong justification of steps/final answer - Complete mathematical working out so that a marker can understand how you arrived at the final solution - Math written in markdown
Regression + Competition	45%	- Incorrect answer - Poor/no justification of steps/final answer via comments in the code or complementary text cells - Few computational steps not related to the correct answer.	- Correct answer - Strong justification of steps/final answer via comments or complementary text cells - Complete computational steps to arrive at the final answer
Presentation is composed the following items below:			

Submitted documents	2.5%	● Did not submit pdf of the notebook file ● Poorly written, hard to follow ● Unstructured	● Submitted pdf of the notebook as well as the notebook file ● Well written, easy to follow ● Well structured
Coding quality/structure/elegance/ Visualisation	2.5%	● Some errors, code does not run, full of warnings ● No comments ● Inefficient/ lengthy syntax (e.g. too many unnecessary for loops, copy and pasting code instead of using functions) ● Computationally inefficient (runs forever) ● No appropriate indenting of code to improve readability ● Number of decimal places used for final answers does not correspond to what was requested in the assignment ● Excessive use of "hard coding" (embedding data directly into the source code of a program or other executable object, as opposed to obtaining the data from external sources or generating it at runtime).	● Code runs, error free, warning free ● Concise syntax ● The redundant or unnecessary code is excluded from the final submission. ● Computationally efficient ● Detailed comments ● Appropriate use of indenting to make code more readable ● Number of decimal places used for final answers matches what was requested in the assignment ● Minimal, if any use of "hard coding" - loads data from external sources or passes data/variables into functions rather than creating the variable inside the function again.