Statistics for Decision Making

Final Assessment

Coding Questions

Instructions: These problems will test you on your ability to manipulate real world data and answer statistical questions. Use property.csv dataset to arrive at the solutions. The data is on real estate prices in Australia. Use this data to test the following hypothesis:

1. For the suburb Altona, it is postulated that a typical property sells for $800,000. Use the data at hand to test this assumption. Is the typical property price really $800,000 or has it increased? Use a significance level of 5%.
2. For the year 2016, is there any difference in prices of properties sold in the summer months vs winter months? Consider months from October till March as winter months and rest as summer months. Use a significance level of 5%.
3. For the suburb Abbotsford, what is the probability that out of 10 properties sold, 3 will not have a car parking? Use the column car in the dataset. Round off your answer to 3 decimal places.
4. In the suburb Abbotsford, what are the chances of finding a property with 3 rooms? Round your answer to 3 decimal places.
5. In the suburb Abbotsford, what are the chances of finding a property with 2 bathrooms? Round your answer to 3 decimal places.

Final Assessment Grading Rubric

1. Required deliverables – a Jupyter notebook dedicated to the solution of each question; the inferences, if applicable, are to be included in the respective sheets.
2. Student facing and faculty rubrics – Total of 2 points per question.