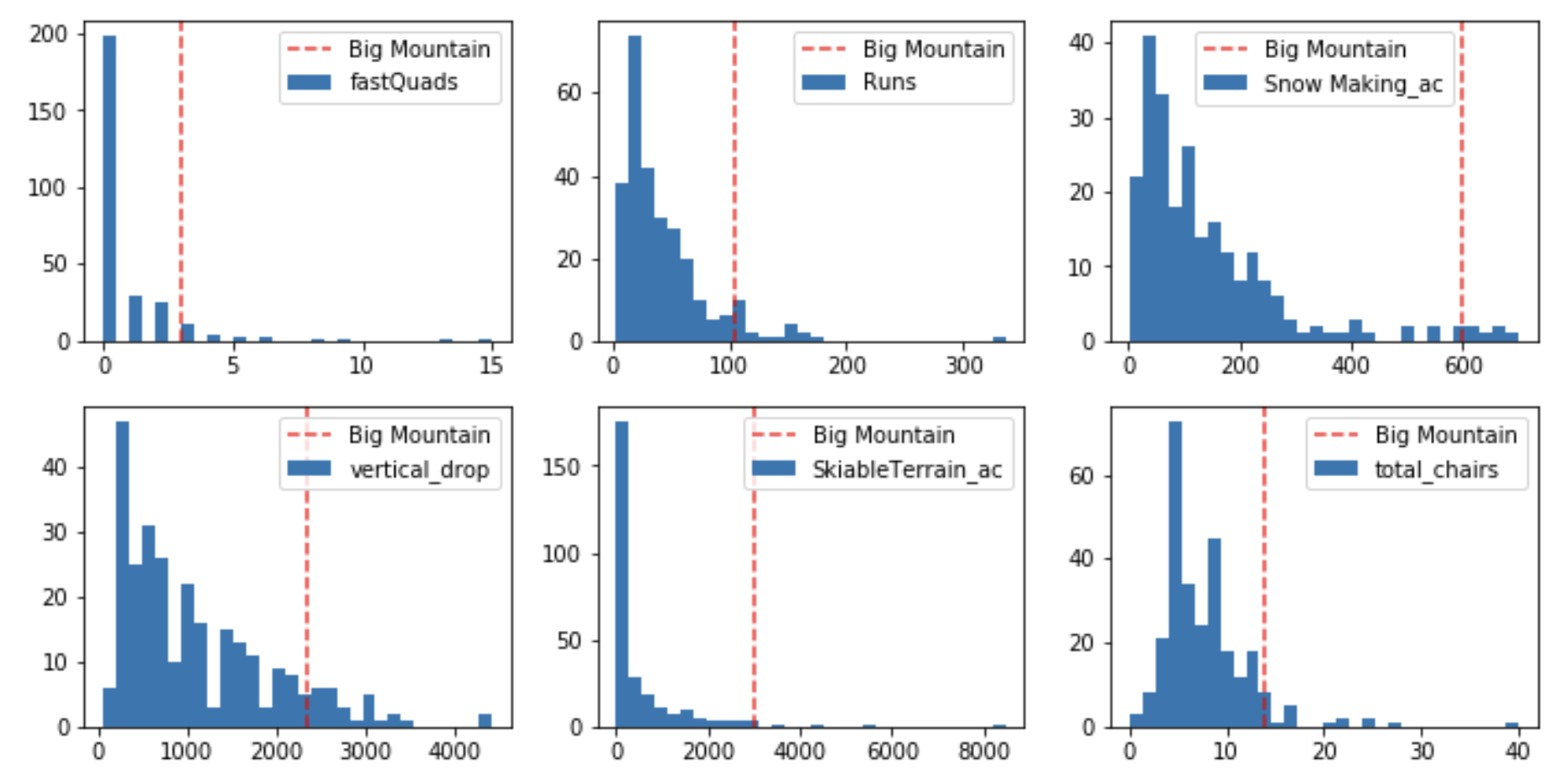
Guided Capstone Project Report

Big Mountain Resort has recently installed an additional chair lift, which has increased the operating costs by $1,540,000 this season. The business is looking for a new ticket pricing strategy such that it can increase its revenue to cover the additional operating costs. It also wants some guidance on future investment in its facilities and properties. Previously, it was just charging a premium above the average price of resorts in its market segment. There are some limitations to this approach. For example, it is not maximizing its returns, relative to its position in the market. It also does not have a strong sense of what facilities matter most to visitors, particularly which ones they are most likely to pay more for. In order to provide some guidance for its pricing strategy and future facility investment plans, I performed an analysis using Random Forest modeling. My recommendations are summarized below.

The current ticket price of Big Mountain is $81.00, and the modeled price is $95.87. Even if the expected mean absolute error of the model is about $10.39, this suggests there is still room for an increase in the ticket price. To better understand Big Mountain Resort’s position in its market context, it would be useful to first take a look at the most important features from the modeling. As shown in the random forest modeling result, the top six dominant features in affecting the ticket price are: fastQuads, Runs, Snow Making\_ac, vertical\_drop, SkiableTerrain\_ac and total\_chairs, respectively.



The histogram of the value of these features for all the resorts in Big Mountain’s market share is shown below. While most resorts have no fast quads, Big Mountain has 3 which puts it high up in this league table. It has a reasonable number of runs, and its snow making area is very high up in that league table. For vertical drop, it is doing well, but there are still quite a few resorts with a greater drop. It is also very high up in the league table of skiable terrain, and has amongst the highest number of total chairs. Based on the comparison of these features between Big Mountain and other resorts in its market share, I would highly recommend for an increase in Big Mountain’s ticket price.