Guided Capstone Project Report

Big Mountain Resort is a resort for skiing in the state of Montana. With a recent installation of a new chair lift, the operating cost was increased by $1,540,000 for this year. This applies pressure to keep a good revenue, and the management team is evaluating to either increase the ticket price, or to close a few facilities which are not used often. This project is established to provide suggestions to answer those questions.

A dataset with much information on 329 other skiing resorts in the US is provided, which is served as resource data for this project. Data wrangling is conducted with removing columns/rows with missing data, and a few new columns were added to include information of each state. Two models were tested, one is the linear and the other random forest. The random forest model was chosen as final due to its better performance. And a ticket price was predicted by applying this model.

From the analysis of data from other resorts, it is suggested that the price should be $96 with $10 possible error, comparing to the current price of $81.

So the management team is suggested to increase the price to $96 due to this analysis.

A few assumptions should be mentioned which might impact the effectiveness of this result. The first one is that we believe ticket prices of all other resorts are determined based on the market. This might not be true as some might be “overpriced” and others might be “underpriced”; next one is that we are lack of operating cost, which we believe will surely affect the reasonable price. The last one is about the local income level/living cost. This is not included in the data, thus its influence to the result is ignored in the model.