Our firm was tasked to manage and manipulate the provided data from Big Mountain Resort. In these findings, the report issues that there are specific features that affect ticket pricing and that there is a under selling of ticket pricing at the Montana facility.  We were also asked to analyze the possible outcomes of four different scenarios, closing 10 runs, adding an additional run without any new snow coverage, similar to the second scenario with adding two acres of snow, and increasing the longest run by 0.2 miles to allow advertising of a 3.5 mile run plus the addition of four acres of snow. These scenarios are the main focuses of this study due to the fact that the most vital features of a ski resorts are involved in these scenarios which are vertical\_drop, Snow Making\_ac, total\_chairs, fastQuads,Runs, LongestRun\_mi, trams, and SkiableTerrian\_ac. A projected model with a standard train/test split of 70/30(ensures that the model can accurately predict new data) was used to project the following numbers and graphs.  Once the model was established it is able to predict the modelled ticket price which is $100.24 while the Montana resort is charging only $81.00.

The first scenario is vital to Big Mountain Resorts’ success because focusing resources on low used runs would be considered a waste of resources. In the graph below:

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It is seen here that the model predicts that there will be initial price drop with the closure of one to two runs. However, what is interesting, is that between the closure of two to eight runs the ticket price reminds steady. The best way to proceed with this data will be analyzing which runs are the least used. Then closing the least popular runs one by one, weeks apart. This way, the resort is given time to analyze true ticket price/revenue drop.

The second scenario is just as worthy, if not more worthy, to investigate further. The model predicts that this would support an increase ticket price of $8.48.  Naturally, this increase of price would raise the revenue ceiling to $14,848,485.  Scenario 3 is identical to the second scenario, except with a difference of increasing snow coverage by 0.2 miles. This minor increase of snow does increase the ticket price by $9.36, bringing a revenue of $16,386,364. The best course of action would be established this new run with the increase snow coverage.

Lastly, increasing the length of the longest run. Although, skiable terrain, the model predicts that there will be no increase in revenue. Therefore, the other scenarios should be prioritized.

At the end of this study, it is safe to conclude that ticket prices at the Montana resort can and should charge more these graphs will demonstrate that this resort high values of desired skiing factors. Yet compared to other resorts, Big Mountain is only in the middle tier of the ticket prices, suggesting that prices can be raised by implementing scenarios 1-3.

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