Springboard Data Science Career Track
Guided Capstone Project
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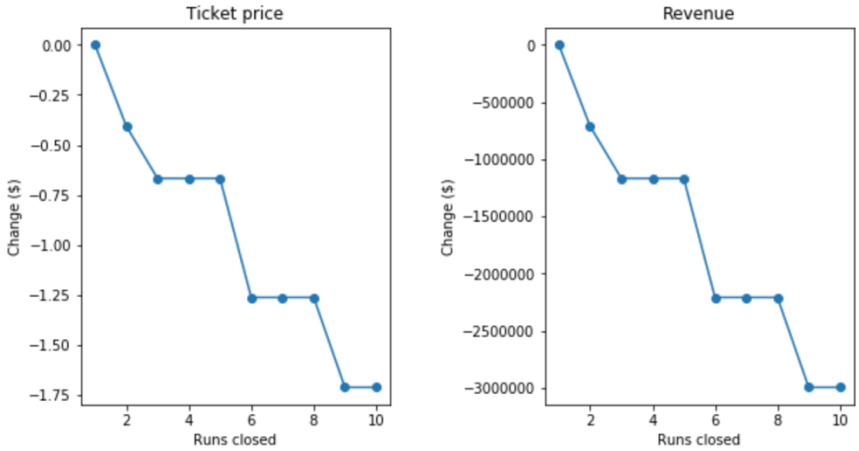
Big Mountain Resort Data Analysis Report

The Big Mountain company has provided us with a list of options:

1. Permanently closing down up to 10 of the least used runs. This doesn't impact any other resort statistics
2. Increase the vertical drop by adding a run to a point 150 feet lower down but requiring the installation of an additional chair lift to bring skiers back up, without additional snow making coverage
3. Same as number 2, but adding 2 acres of snow making cover
4. Increase the longest run by 0.2 mile to boast 3.5 miles length, requiring an additional snow making coverage of 4 acres

Based on our model, we can begin to analyze the effect of each of these options on our revenue.

Option 1: Close Up to 10 of the Least Used Runs



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The graphs depict allowable change in ticket price as a function of runs closed.
According to our model, closing down on runs will force us to decrease our ticket prices and by extension, lower our revenue. In conclusion, this option does not seem viable.

Option 2: Add run, increase the vertical drop by 150 feet, install an additional chair lift

Using the built model, we were able to predict the allowable increase in ticket prices and revenue. The results of adding 1 run, increasing the vertical drop by 150 feet, and installing an additional chair lift yielded the following results: We would be able to increase our ticket price by $1.99, which would translate into an increase in revenue of $3,474,638. This looks promising as it appears that going with this option would allow us to increase our ticket price by up to $1.99 and increase our revenue as well. Let us explore the other options first.

Option 3: Same as Option 2, but adding 2 acres of snow making in addition

Using the same function as used for the previous option, we interestingly get the exact same results as we did for option 2. It appears that adding acres of snow making has no effect on ticket price.

Option 4: Increase the longest run by 0.2, adding 4 acres of snow making capability.

Using our function, it appears that this option has no effect on an allowable increase in ticket price. Therefore it will not be considered.

In conclusion, it seems that either option 2 or 3 will be equally optimal in generating some extra revenue for the resort. Based on our analysis, it appears that the number of runs, acres of snow making, and vertical drop are all irrelevant factors when it comes to the ticket price. It appeared

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that only the amount of chairlifts installed was related to ticket price. Should the company start to consider other alternatives, we recommend that they keep the results of our model in mind.