Big Mountain Data Model

Synopsis

When comparing Big Mountain's features to those throughout the country, we do find Big Mountain is undercharging. Particularly, the following features are found to the be most important and which constitute higher ticket prices at other resorts:

- Vertical Drop (highest lift served point)
- Snow Making Ability
- Total Lift Chairs
- Number of Fast Quad Chairs
- Number of Runs
- Longest Run
- Number of Trams
- Area of Skiable Terrain.

Big Mountain's current ticket price is $81, but the model predicts a ticket price of $96.32 +/- $10.41 which supports an increase even within the error range without changing any of the features. The analyses below assume each of the 350,000 visitors per season buys 5 tickets and compares adult weekend ticket prices. However, further analysis may need to occur as Big Mountain is already at the top of ticket prices for the state of Montana (see Additional Figures).

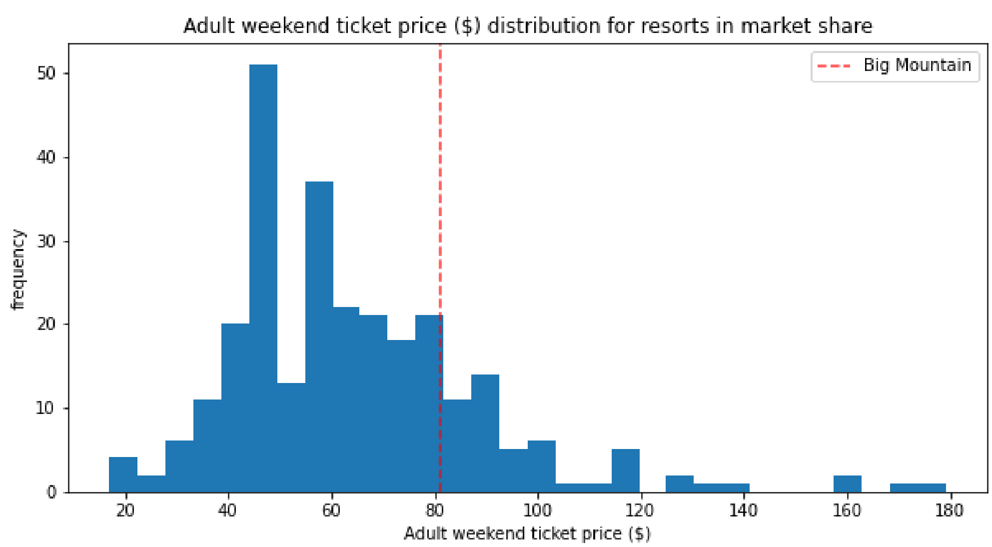


Figure 1: Big Mountain's adult weekend ticket prices (red line) in comparison to other resorts throughout the country.

Shortlisted Options for Changing Features

1. Permanently closing down up to 10 of the least used runs.

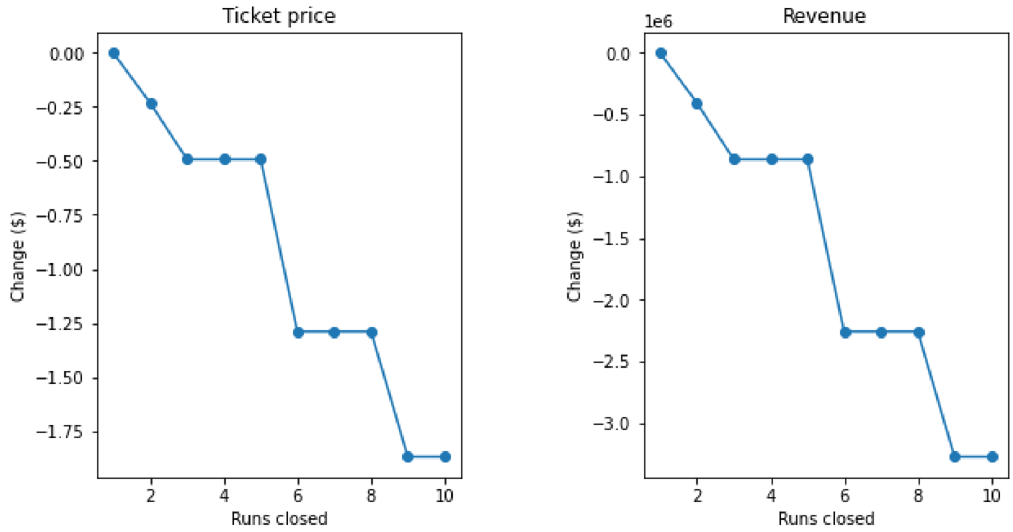


Figure 2: The effect closing 1-10 runs has on (left) ticket price and (right) revenue per ticket.

The resort could close 1 run without consequence, but more would necessitate a decrease in ticket price. If we explore this further, we would need information on the cost of operating each run, desirability, if it's one that artificial snow is used on, and possibly other currently unknown information. As a note, this assumes the longest run, skiable terrain, and snow making area all remain the same. As mentioned above, these are important assets and more models would need to be run on each specific proposed run closure in order to account for the affecting on these feature values. Therefore, it is not recommended to close down more than 1 obsolete run without further analysis on individual run closure effect on the overall model ticket price prediction.

2. Increase the vertical drop by adding a run to a point 150 feet lower down and installing an additional chair lift to bring skiers back up.

This change supports a ticket increase of $1.99 per ticket and would increase revenue by $3.47 million over a season. A cost benefit analysis needs to be performed in order to support or repudiate this option.

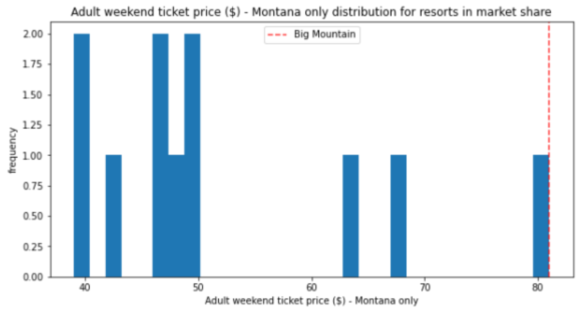
3. Same as number 2 (above), but adding 2 acres of snow making cover.

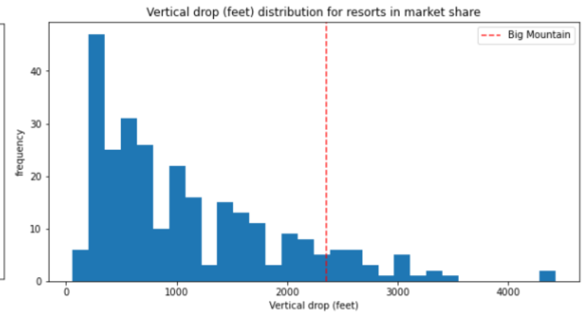
There is no support for further ticket price increase above the already suggested $1.99 per ticket so increasing the snow making cover by 2 acres is not suggested.

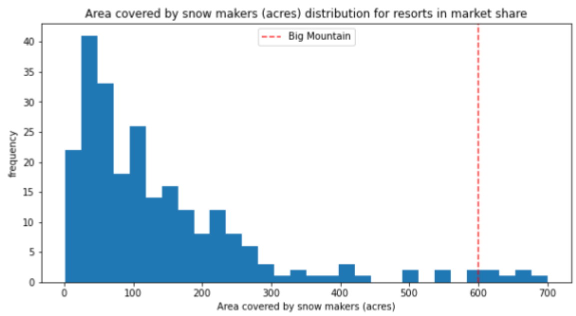
4. Increase the longest run by 0.2 mile to boast 3.5 mile length, requiring an additional snow making coverage of 4 acres

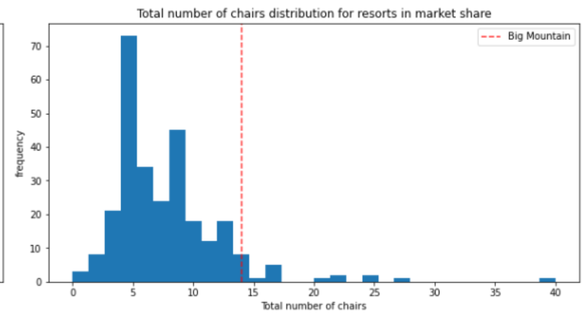
The model does not support an increase for this option and it should not be further considered.

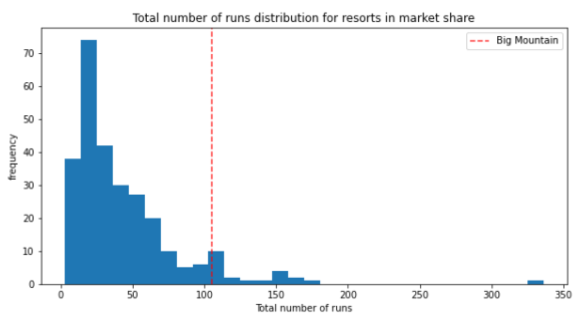
Additional Figures

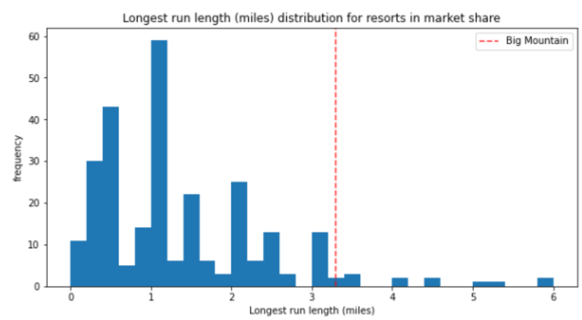


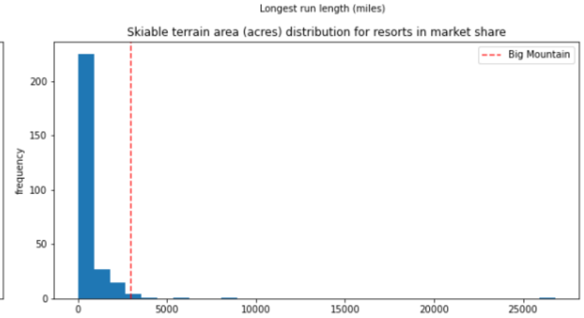












Further Analysis

One of the significant data deficiencies we had were lack of visitor data for the parks. It would be useful if we could see why certain resorts were lower in price which had high skiable terrain, for instance. Further, while the model suggests a higher ticket price is warranted as is, Big Mountain is already the most expensive resort in Montana which is a lower populated state. More data of nearby resorts (South Dakota, Wyoming, Minnesota, Idaho, maybe Northern Colorado) would help in analyzing how much the ticket price could be increased for the more "rural" market. Other information, such as if Big Mountain is in or by a destination city, could help justify a higher cost. The main reason Big Mountain modeled so high is the skiable terrain, longest run, number of runs, snow making, and fast quad chairs so any changes to those attributes will have the highest effect on ticket price value.