Problem Statement

Big Mountain Resort needs to increase revenue by at-least $1,540,000 for this season by developing a data-driven business strategy to justify higher value for their ticket prices. They are also open to ideas to cut operational cost without undermining the ticket price.

1 Context

A new chair lift that was added to help increase the distribution of visitors across the resort resulted in a $1,540,000 increases of operating costs for this season. To offset this, resort is looking for ideas to increase revenue this season (at a minimum by $1,540,000) by revisiting their ticket pricing strategy (currently resort charges a premium above the market average). One initiative is to develop a data-driven business strategy by capitalizing on its facilities and comparing those to other resorts to justify higher ticket prices. Resort is also open to consider changes that will help cut costs (reduce # of runs without undermining the ticket price.

2 Criteria for success

- Increase revenue by at least $1,540.000 by end of this season.

3 Scope of solution space

- The focus will be placed on developing a data-driven business strategy to justify higher ticket prices by capitalizing on Big Mountain's facilities and comparing those to other resorts (such as night skiing feature, skiable areas)
- Cut cutting initiatives (reducing # of runs)

4 Constraints within solution space

- There is limit on how much they can increase the ticket prices compared to other resorts and how clients would react to it.
- Resistance from staff if for examples the # of operations days had to be reduced
- Average annual snowfall is a big factor on how much snow making machines has to be utilized

5 Stakeholders to provide key insight

- Jimmy Blackburn, Director of Operations
- Alesha Eisen, Database Manager
- VP of Operations
- CEO, COO, CFO

6 Key data sources

- CSV file from the database manager that contains information from 330 resorts in the US
- These same data columns also exist for Big Mountain Resort as well.
- Other publicly available data

Recommendation and Key Findings

- A model was developed to predict ticket prices based on ski resorts' features and facilities
- Big Mountain's ticket price could be $96.00 (*currently $81.00 for an adult weekend ticket)* considering the Big Mountain's facilities (results in a revenue of more than $26MM**)
- Scenario #2 is the recommended one for the resort to consider.
- This scenario increases support for ticket price by ~ $2.00 (within the expected mean absolute error of $10.39)
- Over the course of the season, this will result in a $3,474,638** revenue, which is well over the operating cost of the additional chair lift installed ($1,540,000 for this season).

*** assumptions:*

a. each visitor buying 5-day tickets
b. 350,000 visitors per season

2.

Modeling Results and Analysis

Modeling showed that the following features are the most important to have in a ski resort and could support a higher ticket price:

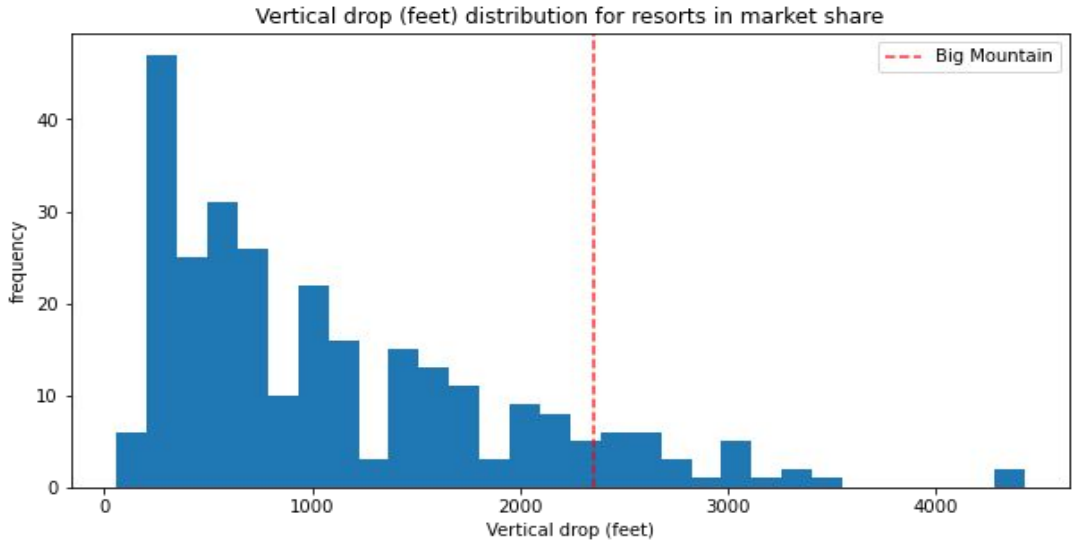
- vertical_drop
- Snow Making_ac
- total_chairs
- fastQuads
- Runs
- LongestRun_mi
- trams
- SkiableTerrain_ac

We will take a look to see how our resort compared to other.

Modeling Results and Analysis

Vertical drop

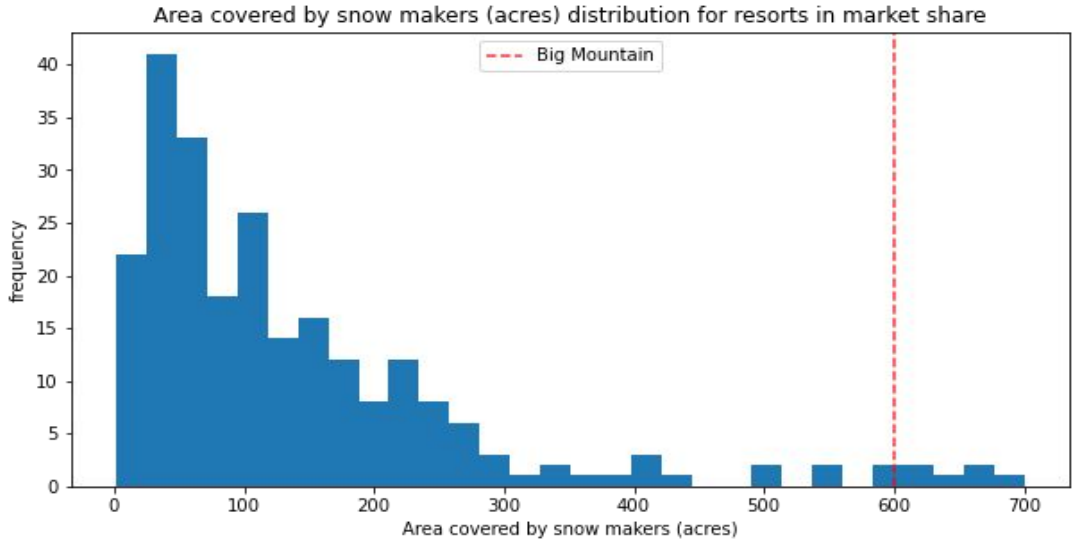
As shown in Figure below, Big Mountain is doing well for the vertical drop, even though there are still quite a few resorts with a greater drop.



Modeling Results and Analysis

Snowmaking area

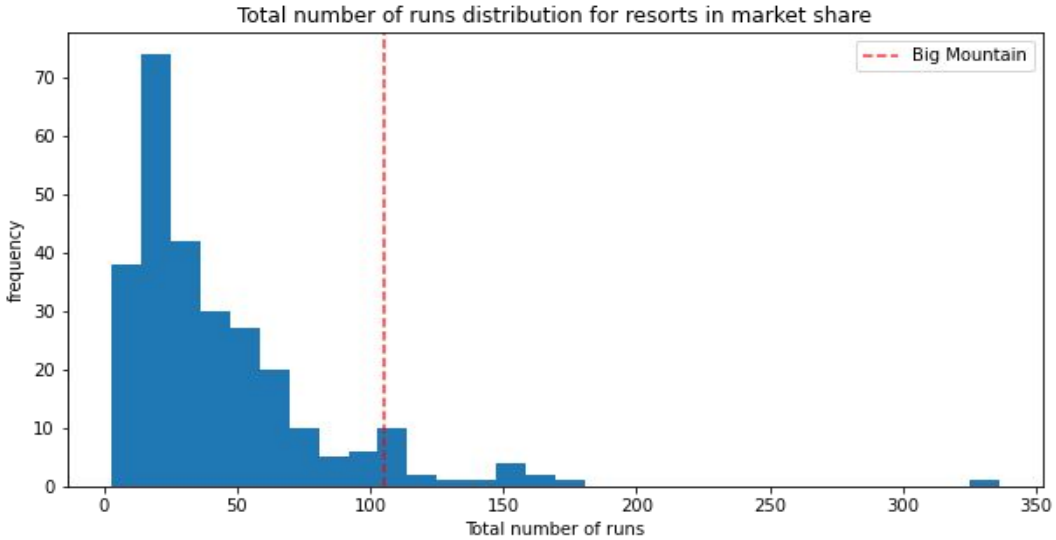
Big Mountain is very high up in terms of snowmaking area, a feature that is very appreciated by visitors.



Modeling Results and Analysis

Runs

Big Mountain compares very well for the number of runs.

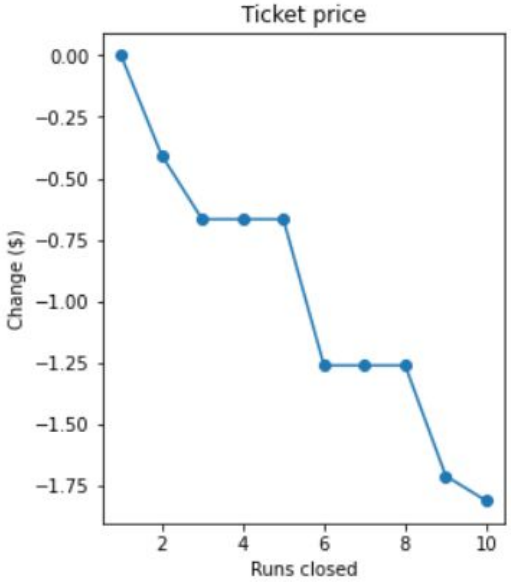


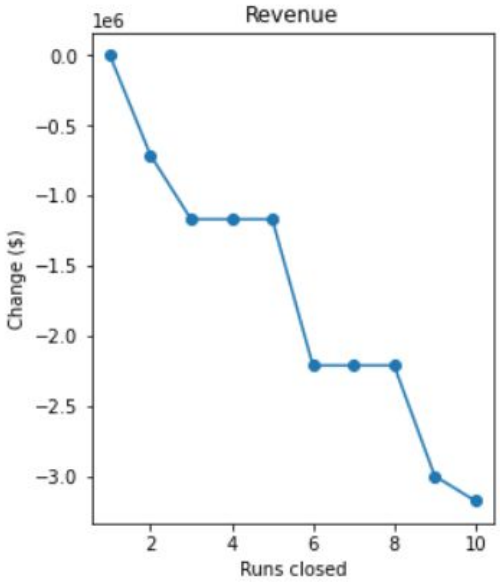
Modeling Results and Analysis

Following potential scenarios were evaluated using the model:

1. Permanently closing down up to 10 of the least used runs
2. Increase vertical drop by 150 feet lower (requiring installation of additional chair lift), without additional snow making coverage
3. Same as number 2, but adding 2 acres of snow making cover
4. Increase longest run by 0.2 mile (total of 3.5 miles length), requiring additional snow making coverage of 4 acres

Under Scenario 1, resort can close one run with no effect on ticket price & revenue. Closing 2 and 3 runs successively reduces support for the ticket price. If Big Mountain decides to close down 3 runs, they can safely close down up to 5 with no further loss in the ticket price





Summary and Conclusion

- Big Mountain's ticket price could be $96.00 (*currently $81.00 for an adult weekend ticket)* considering the Big Mountain's facilities (results in a revenue of more than $26MM)

- Scenario #2 is the recommended one for the resort to consider. Over the course of the season, this will result in a $3,474,638 revenue, which is well over the operating cost of the additional chair lift installed ($1,540,000 for this season).

- For future improvements, the resort may want to look at Scenario 1 and evaluate it in more detail and carefully before implementing it