Problem Identification

Context:

Big Mountain Resort has recently installed an additional chair lift to help increase the distribution of visitors across the mountain. This additional chair increases their operating costs by $1,540,000 this season.

The resort's pricing strategy has been to charge a premium above the average price of resorts in its market segment. We know there are limitations to this approach. There's a suspicion that Big Mountain is not capitalizing on its facilities as much as it could. Basing their pricing on just the market average does not provide the business with a good sense of how important some facilities are compared to others. This hampers investment strategy.

Problem Statement:

How to increase the revenue for the Big Mountain resort by selecting a better value for the ticket price for the given projected days open in the upcoming season?

Recommendation and key findings

The business has shortlisted some options:

(a) Permanently closing down up to 10 of the least used runs. This doesn't impact any other resort statistics.

(b) 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.

(c) Same as step b, but adding 2 acres of snow making cover.

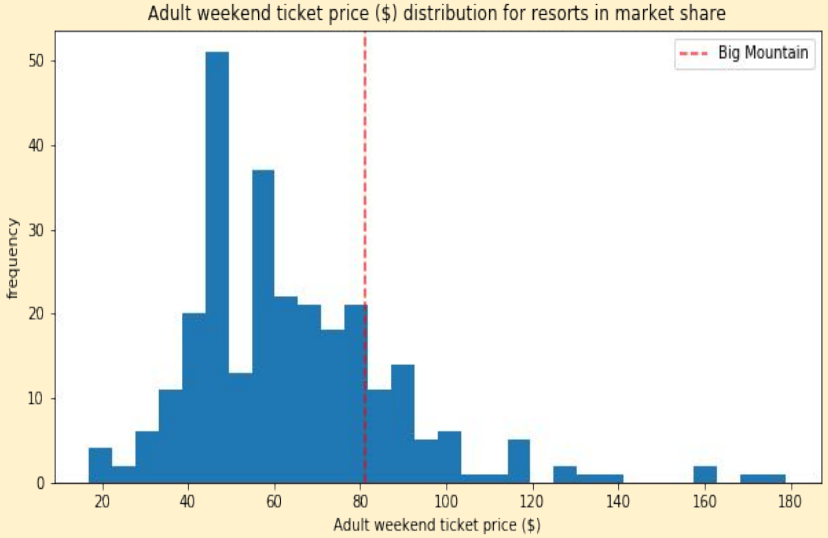
(d) Increase the longest run by 0.2 mile to boast 3.5 miles length, requiring an additional snow making coverage of 4 acres.

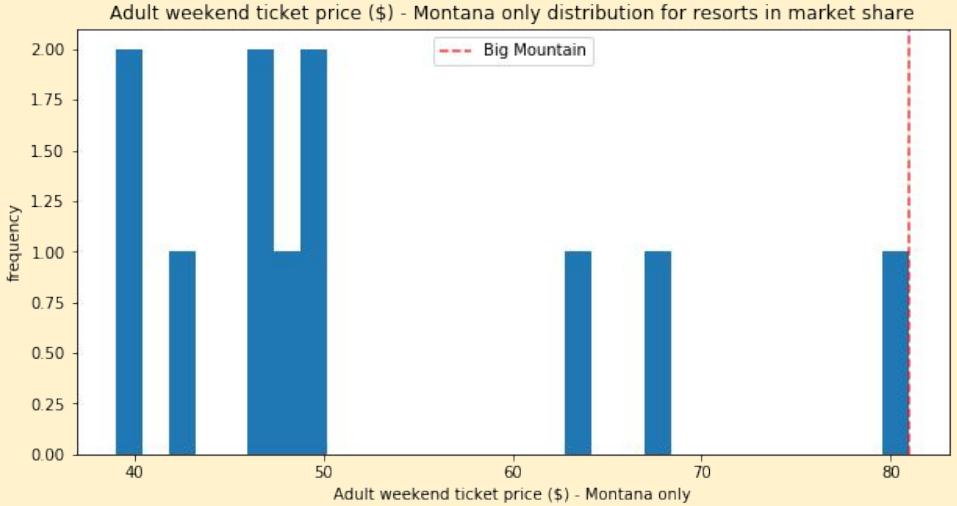
(e) We determined that predicting the adult weekend ticket price is our primary aim.

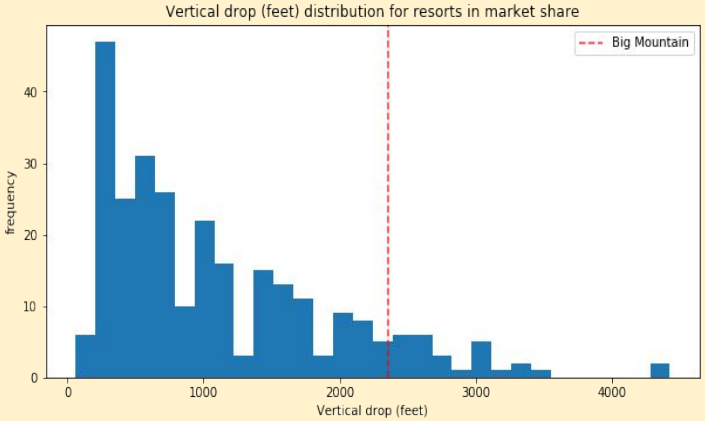
Modeling results and analysis

Big Mountain Resort modelled price is $94.22, actual price is $81.00. Even with the expected mean absolute error of $10.39, this suggests there is room for an increase.

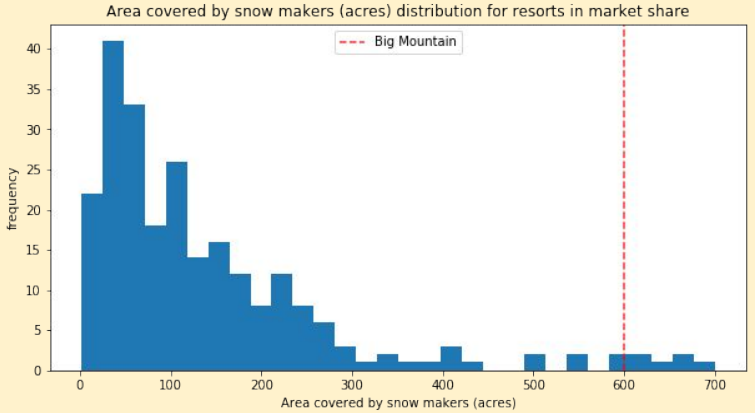
Look at where Big Mountain sits overall amongst all resorts for price and for just other resorts in Montana.



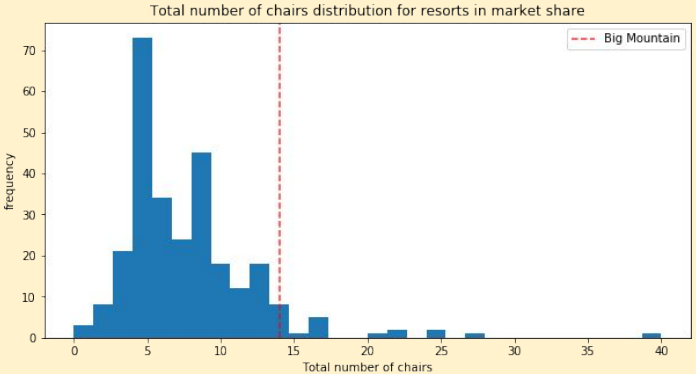




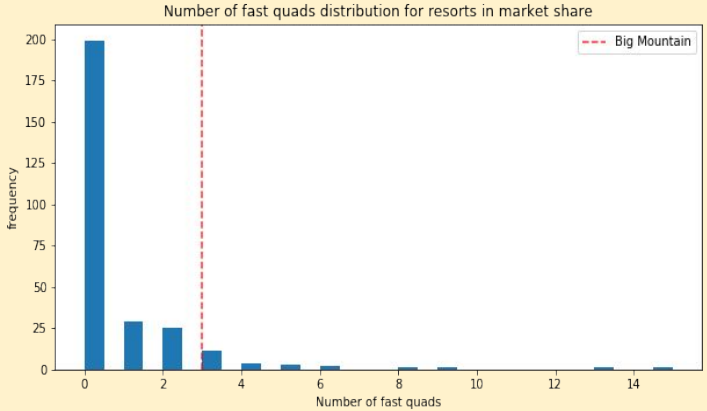
Big Mountain is doing well for vertical drop, but there are still quite a few resorts with a greater drop.



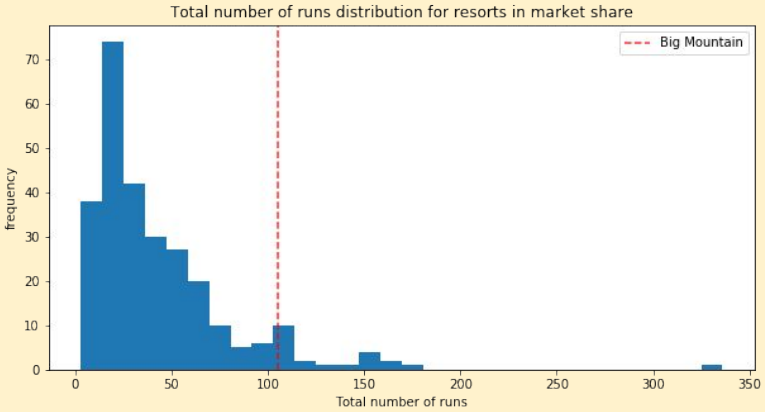
Big Mountain is very high up the league table of snow making area



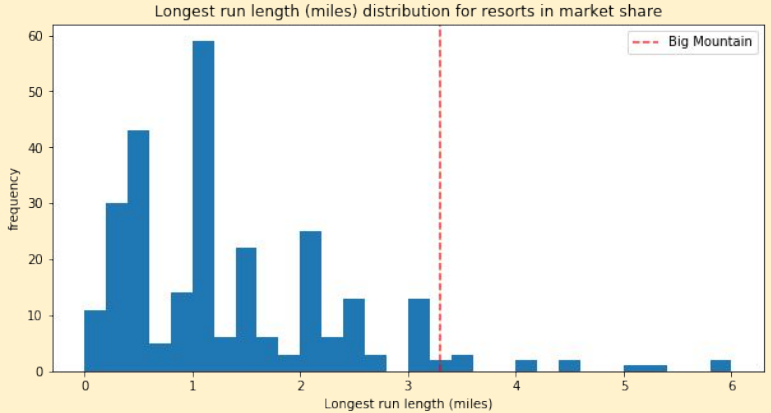
Big Mountain has amongst the highest number of total chairs, resorts with more appear to be outliers.



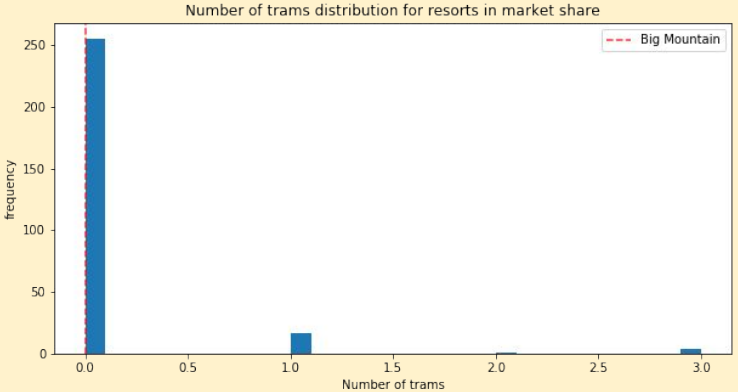
Most resorts have no fast quads. Big Mountain has 3 which puts it high up that league table.



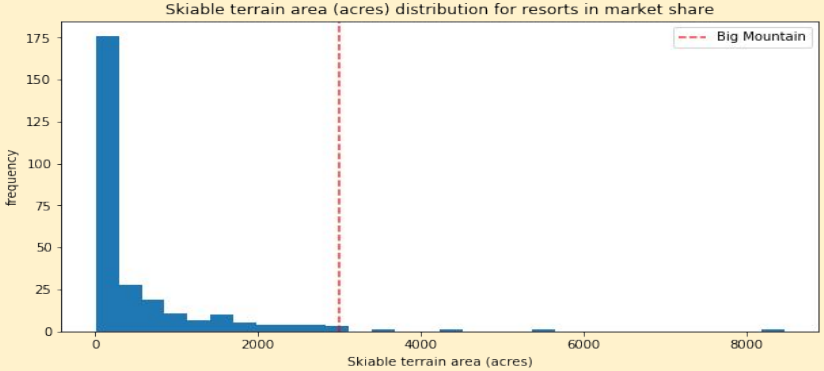
Big Mountain compares well for the number of runs. There are some resorts with more, but not many.



Big Mountain has one of the longest runs. Although it is just over half the length of the longest, the longer ones are rare.



The vast majority of resorts, such as Big Mountain, have no trams.

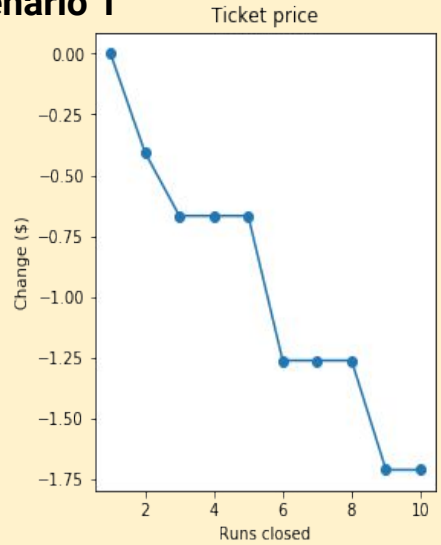


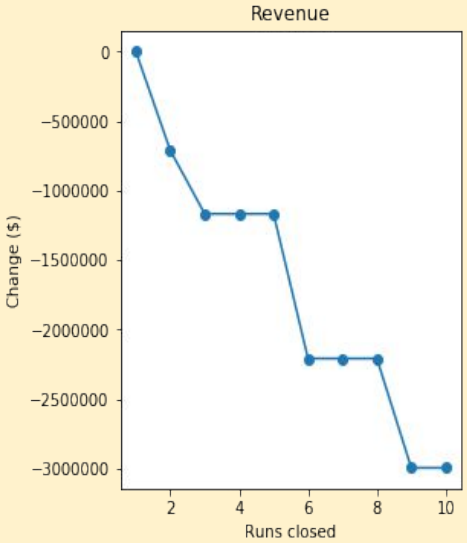
Big Mountain is amongst the resorts with the largest amount of skiable terrain.

Modeling scenarios

The expected number of visitors over the season is 350,000 and, on average, visitors ski for five days. Assume the provided data includes the additional lift that Big Mountain recently installed.

Scenario 1





The model says closing one run makes no difference. Closing 2 and 3 successively reduces support for ticket price and so revenue. If Big Mountain closes down 3 runs, it seems they may as well close down 4 or 5 as there's no further loss in ticket price. Increasing the closures down to 6 or more leads to a large drop.

Scenario 2

Big Mountain is adding a run, increasing the vertical drop by 150 feet, and installing an additional chair lift. This scenario increases support for ticket price by $8.46. Over the season, this could be expected to amount to $14811594

Scenario 3

you are repeating the previous one but adding 2 acres of snow making. This scenario increases support for ticket price by $9.75 Over the season, this could be expected to amount to $17068841

Conclusion

By adding a run, increasing the vertical drop by 150 feet, and installing an additional chair lift. This scenario increases support for ticket price by $8.46. Over the season, this could be expected to amount to $14811594 and also if we are going to add 2 acres of snow making, This scenario increases support for ticket price by $9.75 Over the season, this could be expected to amount to $17068841.