
BIG MOUNTAIN
PRICE
RECOMMENDATION
Victorian Mattar

Big Mountain Ski Resort

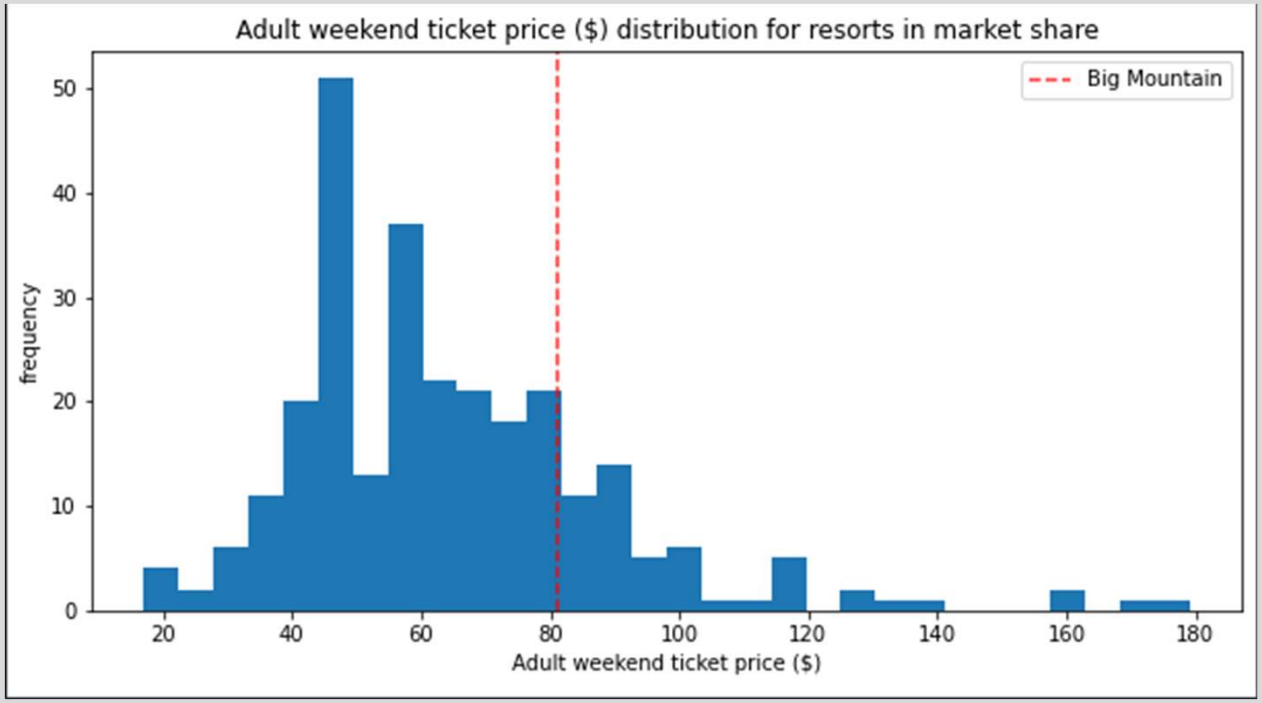
- The objective of this project is to develop a pricing model for ski resorts tickets based on available market data.
- Big Mountain Ski Resort management believes that it may not be maximizing revenue from ticket sales, in relation to its market position.
- The goal is to build a predictive model for ticket prices based on market data.

Model Results

- The model provides insight as what Big Mountain's ideal ticket price could/should be, and how that might change under various scenarios.
- The actual ticket price is $81.00. And the model result price is $94.22. This suggests that there is room for an increase, with an expected mean absolute error of $10.39 and standard deviation of $1.47.

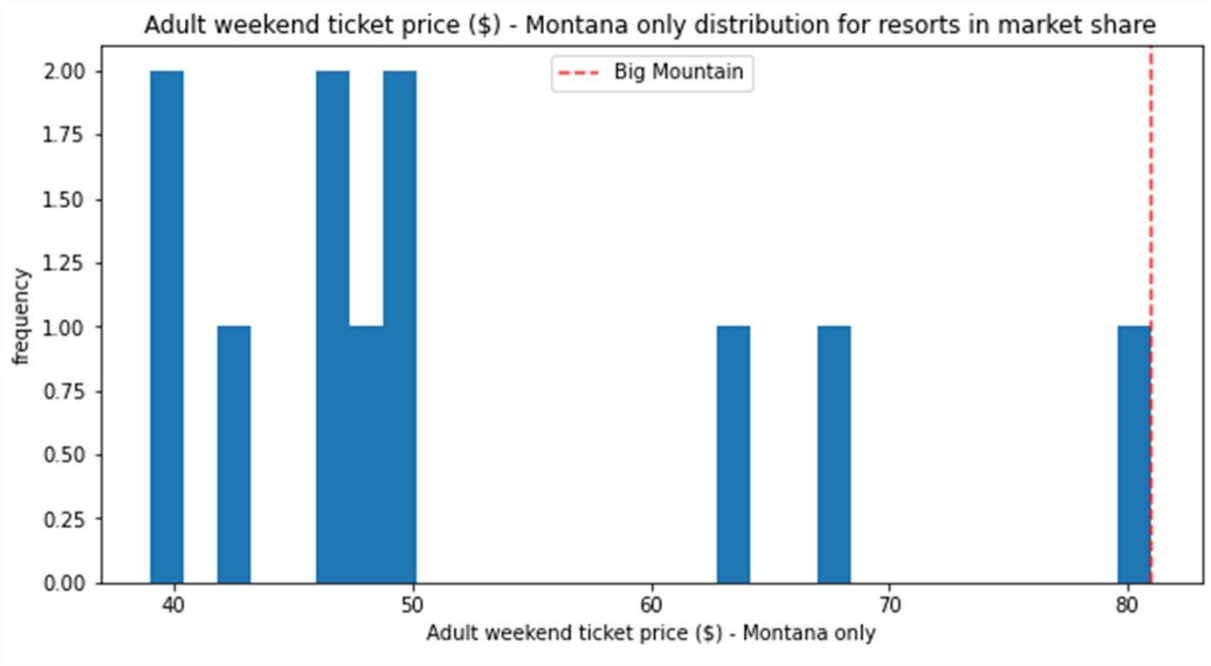
- Features that came up as important in the random forest modeling:
  - vertical_drop
  - Snow Making_ac
  - total_chairs,
  - Runs
  - SkiableTerrain_ac

Ticket Price (national distribution)



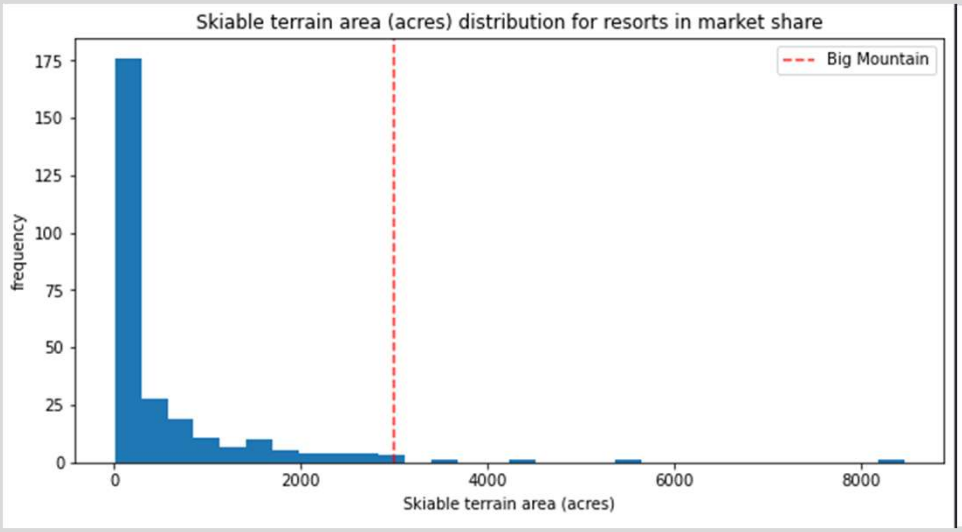
- Big Mountain is on the higher end of the ticket prices distribution nationally.

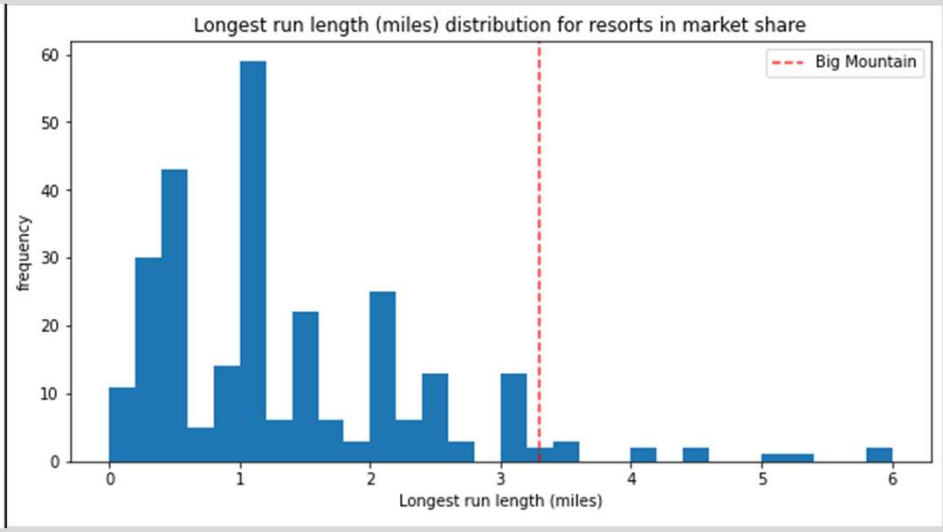
Ticket Price (Montana distribution)



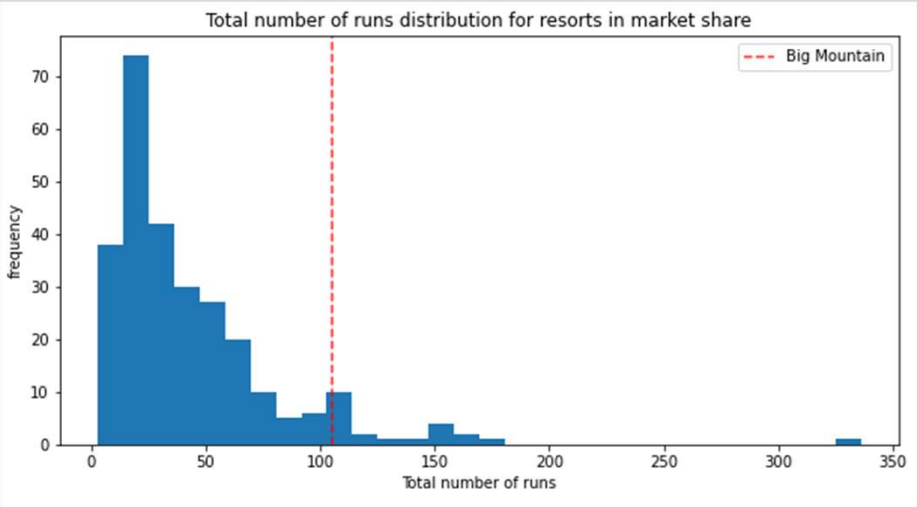
- Big Mountain has the most expensive ticket prices in Montana.

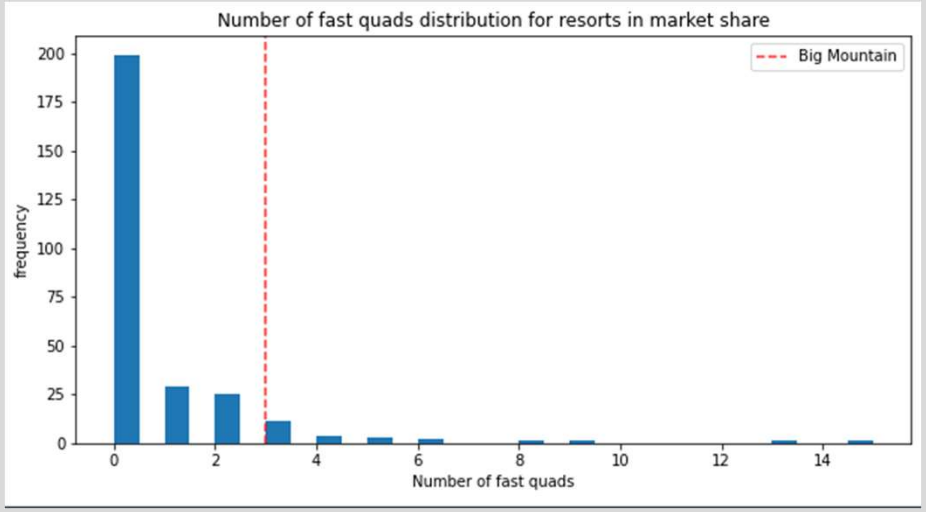
Distribution of key features: Skiable terrain (acres), Longest run (miles).



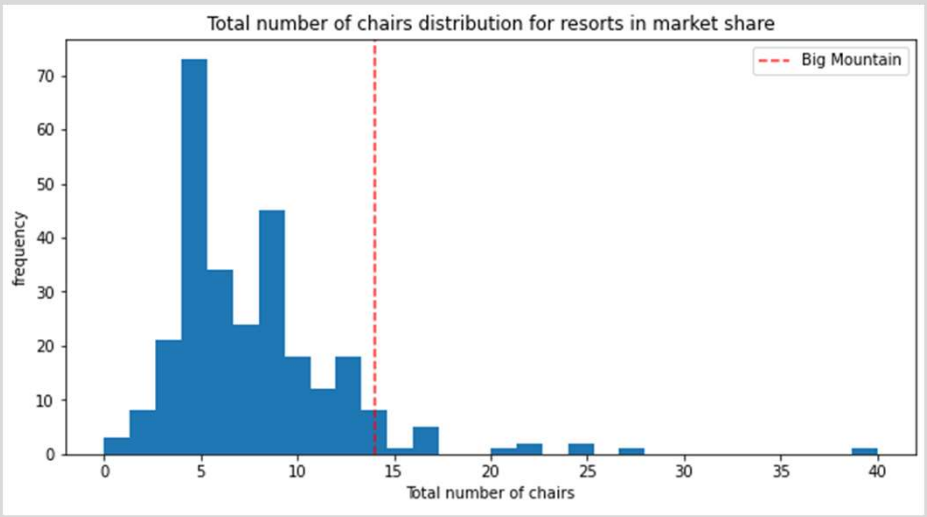


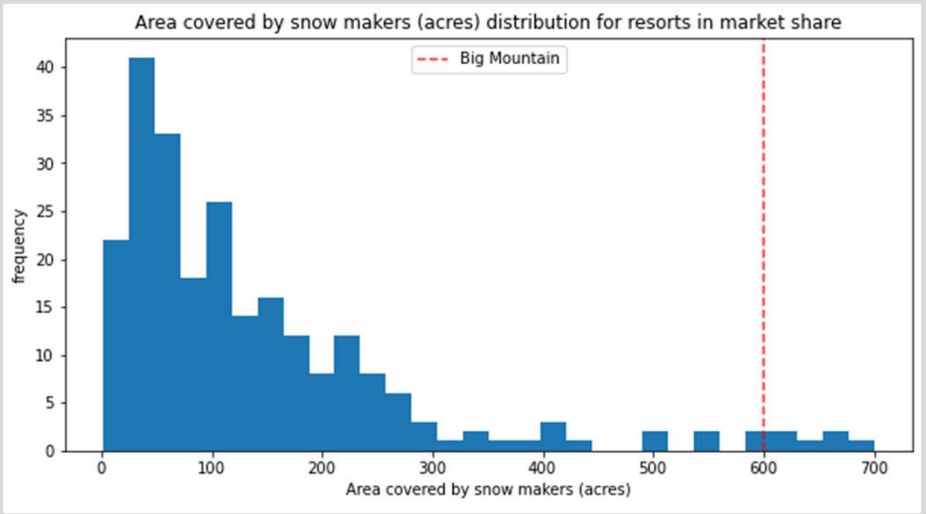
Distribution of key features: Total number of runs, Number of fast quads.





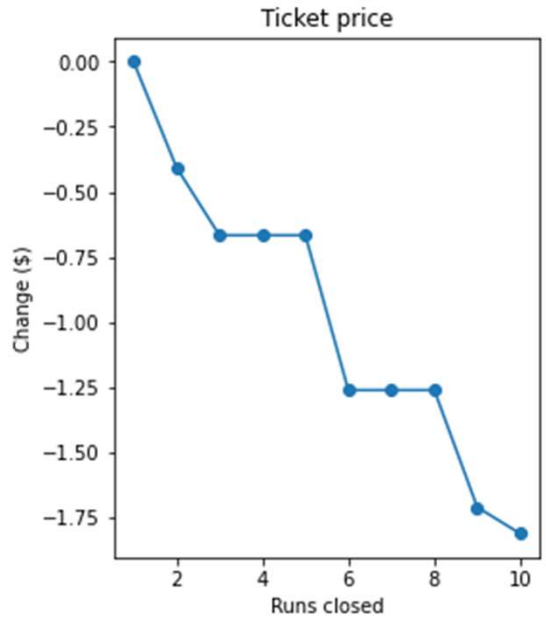
Distribution of key features: Total number of chairlifts, area covered by snow makers (acres)

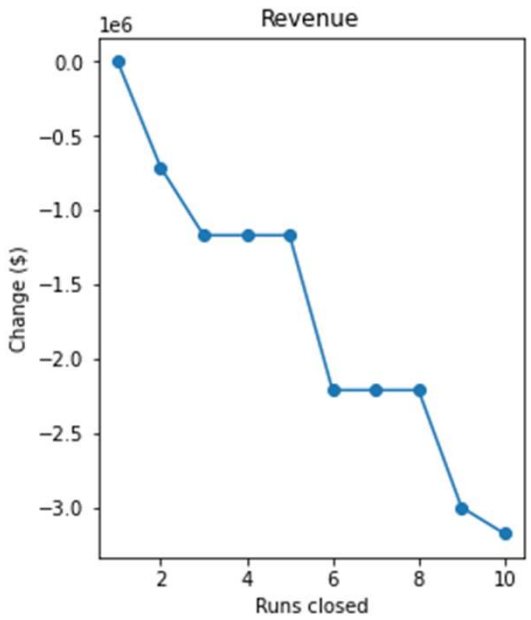




Modeling scenarios

- We model two scenarios with feature modification
- Scenario One:
  - Close up to 10 of the least used runs. The number of runs is the only parameter varying.
- Scenario Two:
  - Big Mountain is adding a run, increasing the vertical drop by 150 feet, and installing an additional chair lift.





Modeling scenarios one Results

the model suggest to close up to 5 most least popular runs, without

impacting visitor's attendance.

Modeling scenarios two results

- This scenario increases support for ticket price by $1.99
- Over the season, this could be expected to amount to $3474638

When we repeat scenario two with the addition of two additional acres of snowmaking, the result is the same.

Conclusions

- Raise ticket price to range from $88-$96
- Adding one chair, one run and 150 vertical feet increases support for ticket price by 2.19,which leads to increased revenue 3.83 million over the course of a season. (given the assumption of 350,000 customers buying 5 tickets). Operating cost for the new chairlift is given at 1.43million. Thus, the projected net profit 2.29 million.

Next Steps

- add to our dataset with more quantitative data from the alpine resort industry like prices for hotels, equipment rentals, and ski or snowboard lesson.

- This model can be used as the backend of a Tableu or Power Bi dashboard to allow business executives to test new combinations of parameters.