Big Mountain Price Recommendation

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Big Mountain Ski Resort

- The purpose of this project is to come up with a pricing model for ski resort tickets in the market segment.
- Big Mountain suspects it may not be maximizing its returns, relative to its position in the market. It also does not have a strong sense of what facilities matter most to visitors, particularly which ones they're most likely to pay more for.
- This project aims to build a predictive model for ticket price based on a number of facilities, or properties, boasted by resorts (*at the resorts).*
- This model will be used to provide guidance for Big Mountain's pricing and future facility investment plans.

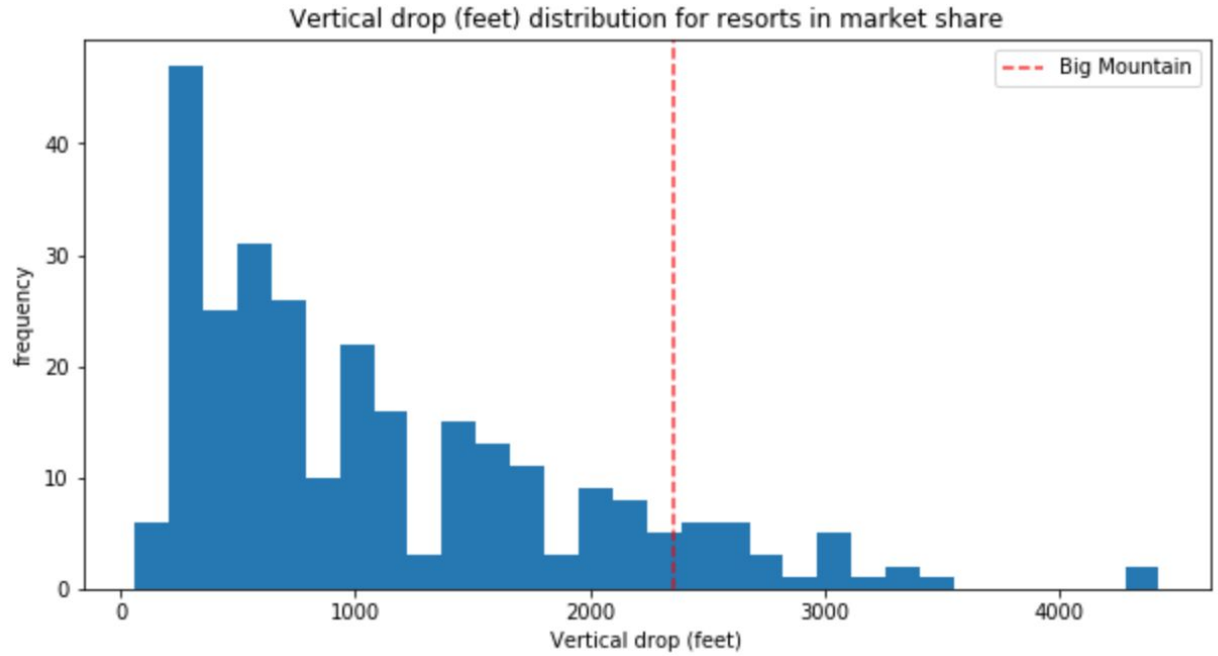
Model Results

The model provides insight as what Big Mountain's ideal ticket price could/should be, and how that might change under various scenarios.

The model was trained and optimized with the provided resort data. 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.

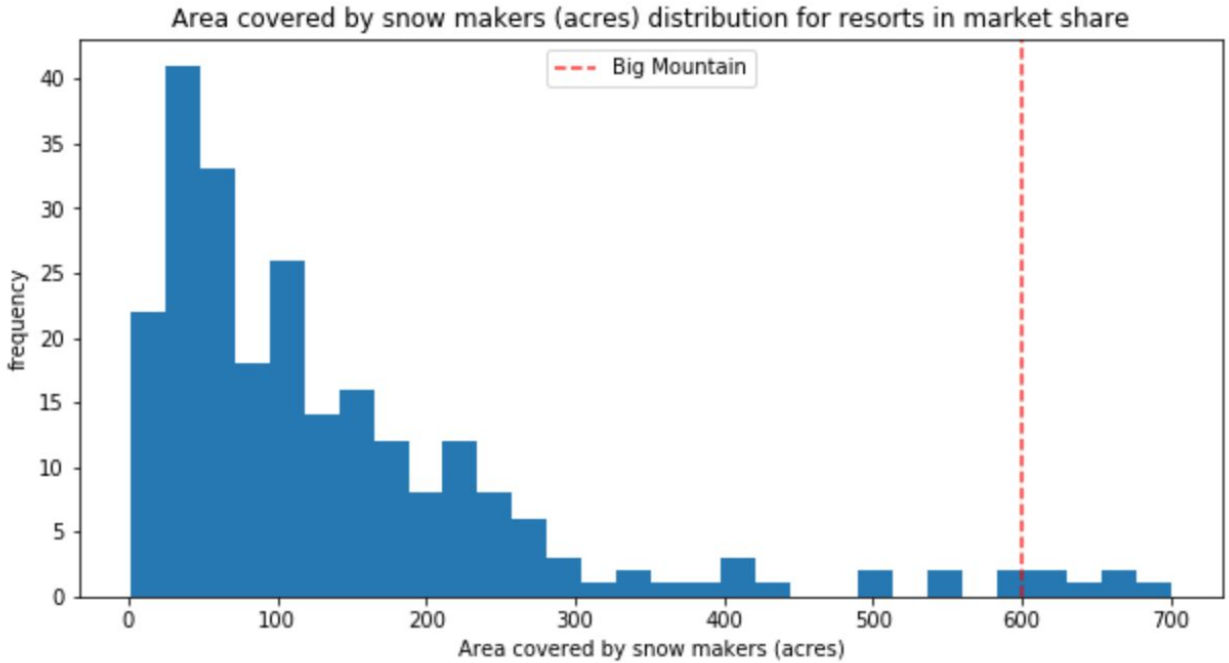
Features that came up as important in the random forest modeling included: vertical_drop, Snow Making_ac, total_chairs, Runs and SkiableTerrain_ac as influential components in determining the price ticket.

Vertical Drop



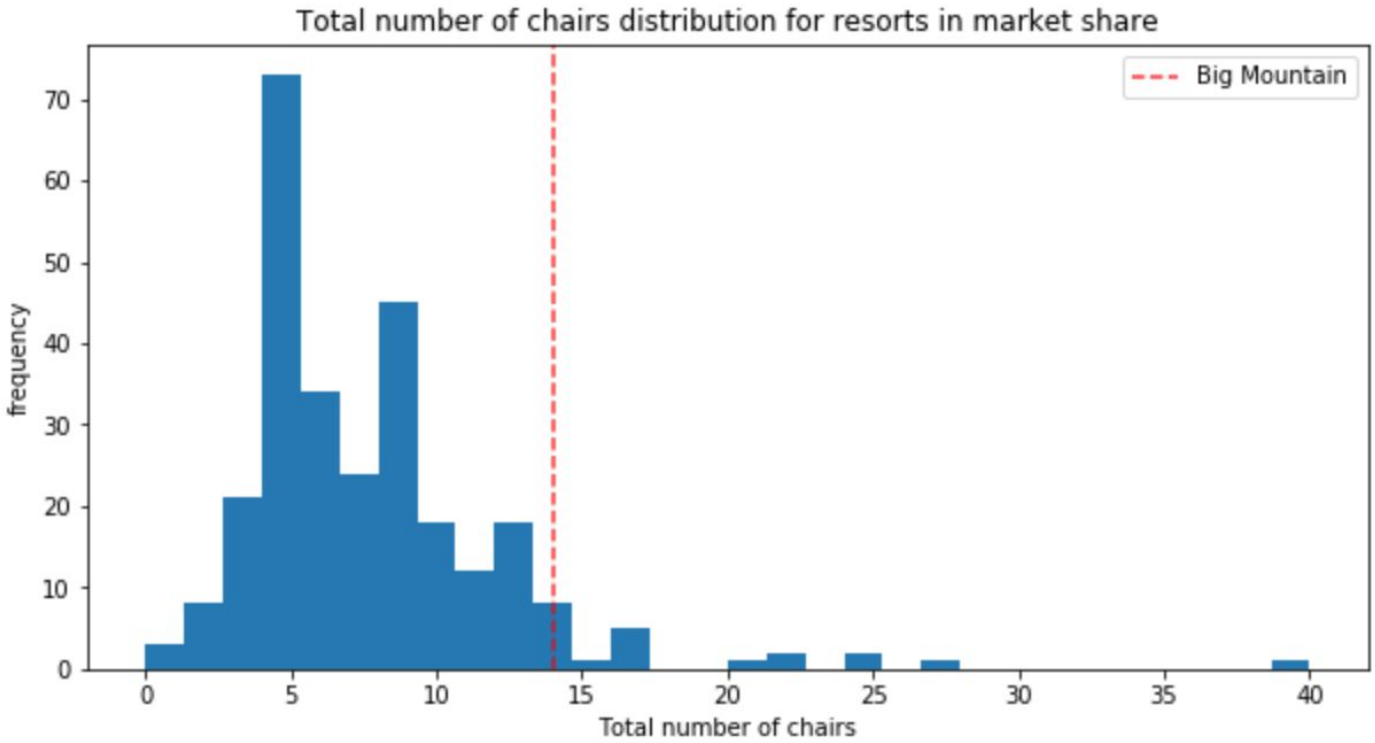
Big Mountain is doing well for vertical drop, but there are still quite a few resorts with a greater drop.

Area Covered by Snow



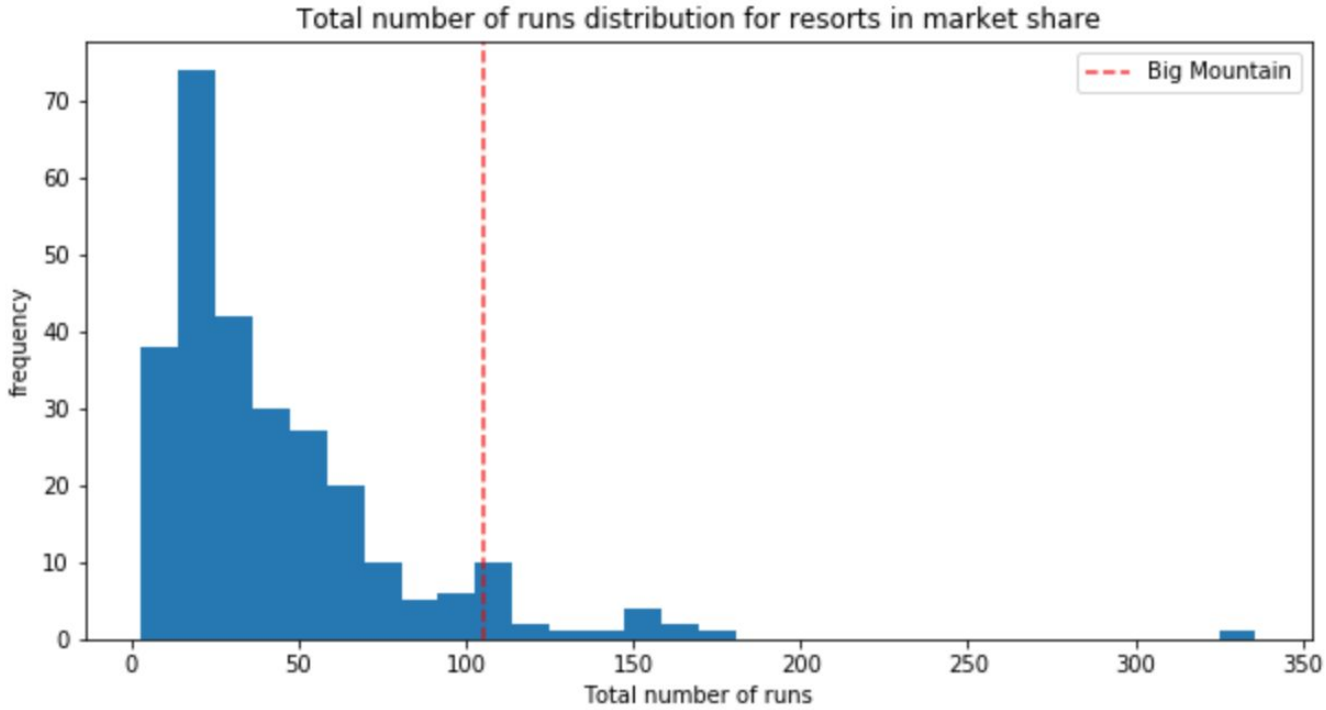
Big Mountain is very high up the league table of snowmaking area.

Total Number of Chairs



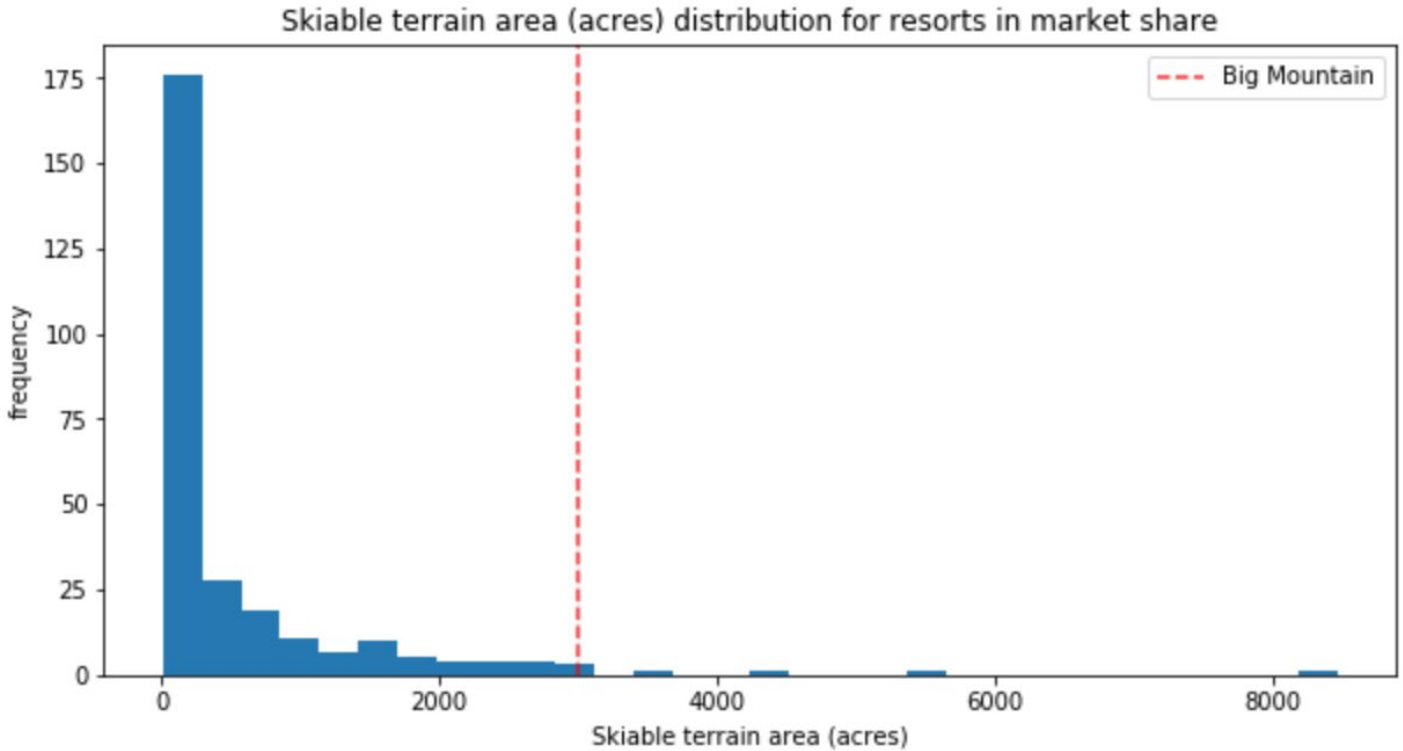
Big Mountain has amongst the highest number of total chairs, resorts with more appear to be outliers.

Total Number of Runs



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

Skiable Terrain Area



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

Reccomandations Summary

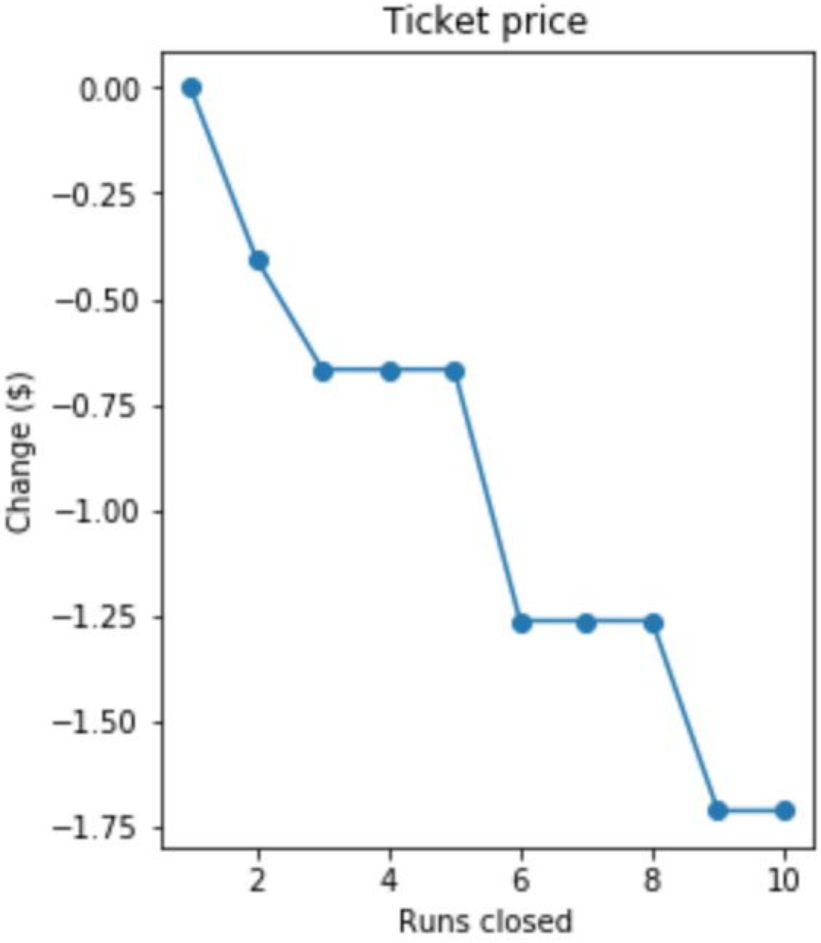
As illustrated above, Big Mountain resort compares favorably with its competitors, in terms of different features which are predictive components for the adult weekend ticket price.

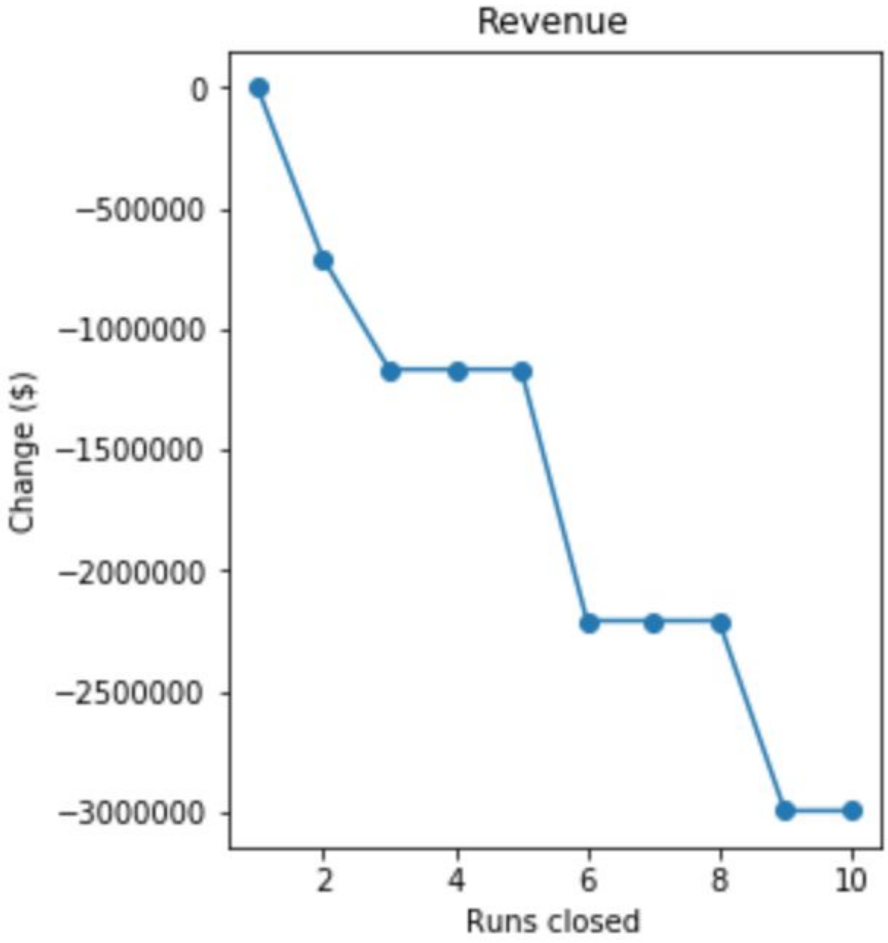
This supports the models recommendation in increasing the ticket price to approximately $95. Even if we assume the maximum error of approximately $10 this market calibration suggests that at minimum Big Mountain increase its ticket price to $85, or less conservatively into the $90-$95 range.

Modification Scenarios and Price Impact

The model was used to investigate various features modifications, and it determined that closing runs will reduce the price. If we assume that each run requires a chair lift, and each chair lift comes with its own cost of approximately $1.5 million, the model suggest to close up to 5 most least popular runs, without impacting the visitors attendance.

One promising avenue for increasing ticket price is to increase maximum vertical drop by 150 feet, which would require the installation of additional chair lift. This would increase the modeled ticket price by an additional $1.99, which would bring the ticket recommended price to $97.


Ticket price
0.00
−0.25
−0.50
−0.75
−1.00
−1.25
−1.50
−1.75
Change ($)
2
4
6
8
10
Runs closed


Revenue
0
−500000
−1000000
−1500000
−2000000
−2500000
−3000000
Change ($)
2
4
6
8
10
Runs closed

Conclusion

Combining all the recommendations the suggested ticket price range would range from $87-$97.

This prediction assumes no national competition with no customer preference for location and no geographical influence on price.