

Problem Identification

- **Context:**

- Big Mountain Resort, a ski resort located in Montana, offers spectacular views of Glacier National Park and Flathead National Forest, with access to 105 trails. The resort has recently installed an additional chair lift to help increase the distribution of visitors across the mountain, which increases their operating costs by \$1,540,000 this season. The business wants some guidance on how to select a better value for their ticket price. They are also considering a number of changes that they hope will either cut costs without undermining the ticket price or will support an even higher ticket price.

- **Criteria for success:**

- Being able to determine the reasonable ticket price that can help them increase the revenue by \$1,540,000 this season.

- **Scope of solution space:**

- The plan of determining the ticket price will be explicitly applied to 330 resorts in the US that can be considered part of the same market share.

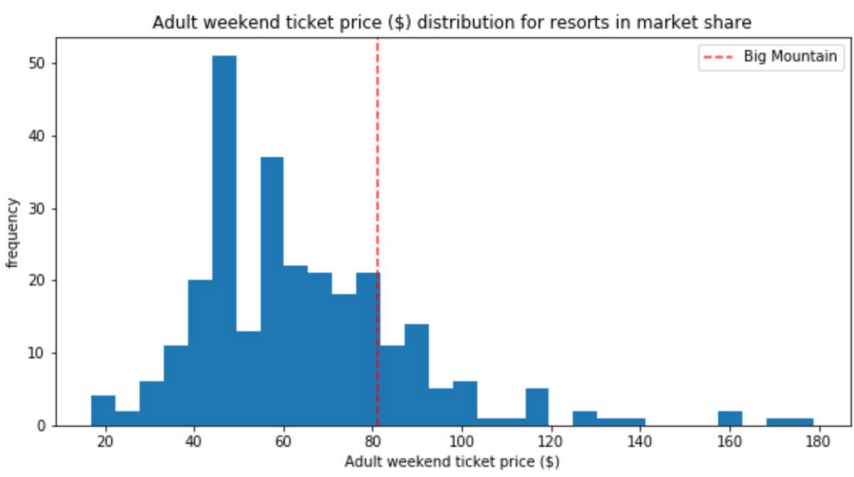
Problem Identification

- **Constraints within solution space:**
 - Hard to undercut the ticket price or keep it the same.
 - Customers may be against the idea of increasing the ticket price.
- **Stakeholders to provide key insight:**
 - Director of Operations: Jimmy Blackburn
 - Database Manager: Alesha Eisen
- **Key data sources:**
 - A single CSV file from the database manager

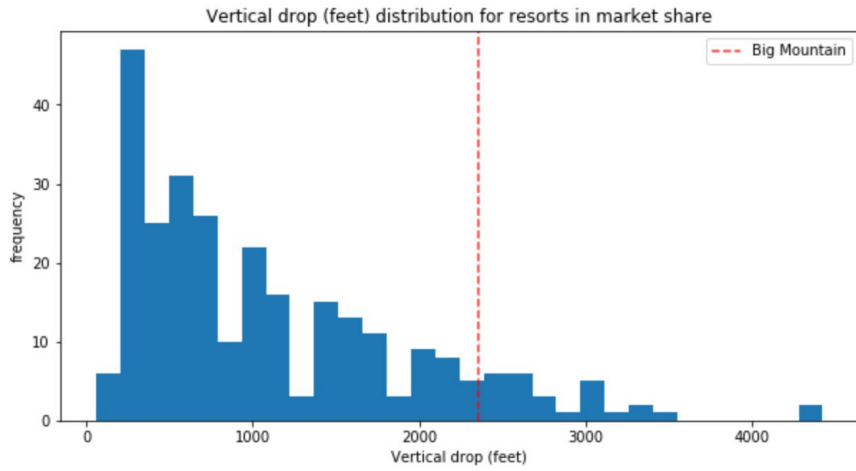
Recommendation and Key Findings

- After calculating the expected ticket price for Big Mountain from our model, we found that Big Mountain currently charges \$81.00 and our model suggests \$94.22 for a ticket price that could support Big Mountain's facilities in the marketplace.
- We also gained some interesting insights from testing our model with four different scenarios:
 - The more runs Big Mountain closes down, the more drops it will see in the ticket price and revenue. Therefore, Big Mountain should not close down any runs.
 - If Big Mountain adds a run, increases the vertical drop by 150 feet, and installs an additional chair lift, it will see increased support for ticket price by \$8.46, which could be expected to amount to \$14,811,594 over the season. If it further adds 2 acres of snow-making cover, it will see the increased support for ticket price by \$9.75, which could be expected to amount to \$17,068,841. Even though it is a slight increase, it will help the business increase the revenue over the season.
 - There is no difference in the ticket price if Big Mountain increases the longest run by 0.2 miles and guarantees its snow coverage by adding 4 acres of snow-making capability.

Modeling Results and Analysis

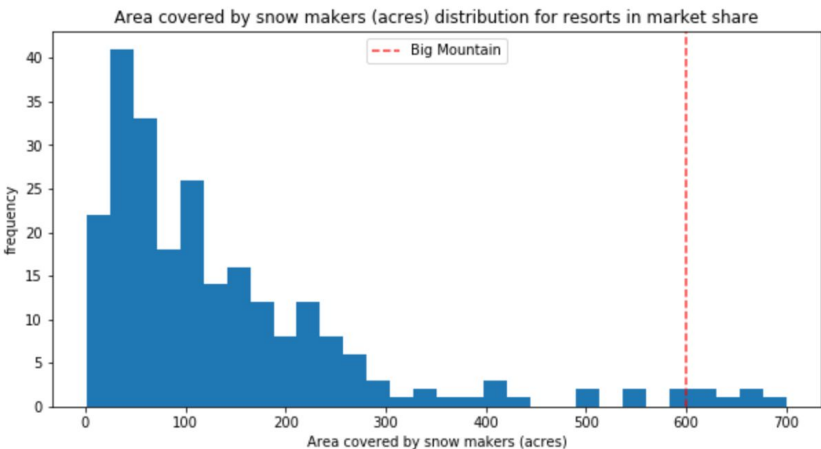


Big Mountain's adult weekend ticket price is approximately \$81 amongst all the resorts.

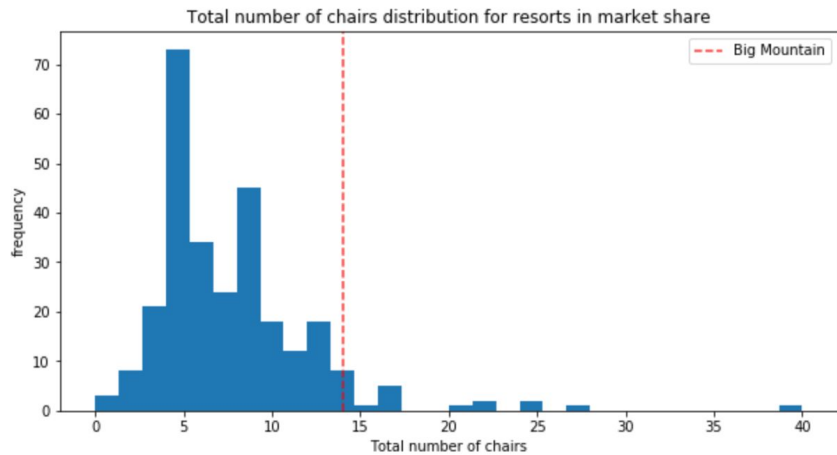


Big Mountain's vertical drop is approximately 2300 feet amongst all the resorts.

Modeling Results and Analysis

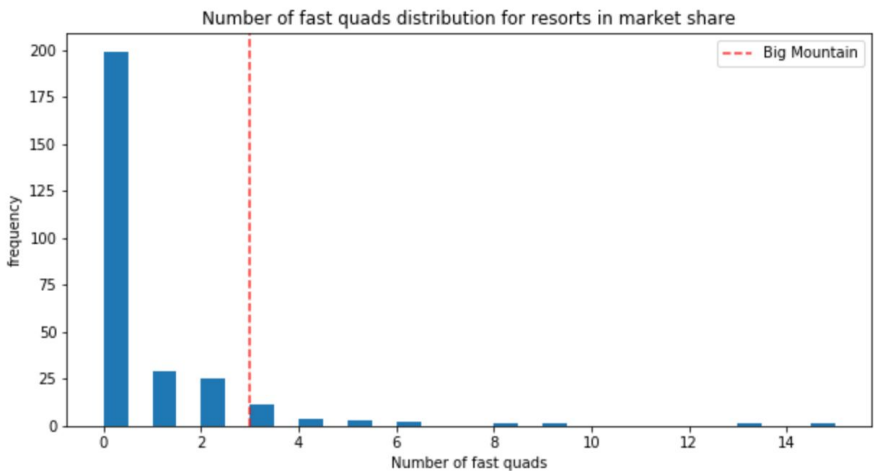


Big Mountain's area covered by snow makers is approximately 600 acres amongst all the resorts.

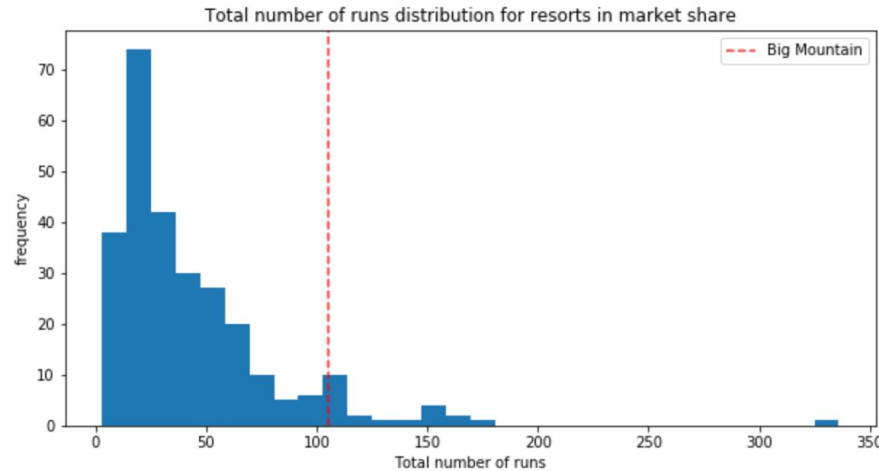


Big Mountain's total number of chairs is approximately 14 chairs amongst all the resorts.

Modeling Results and Analysis

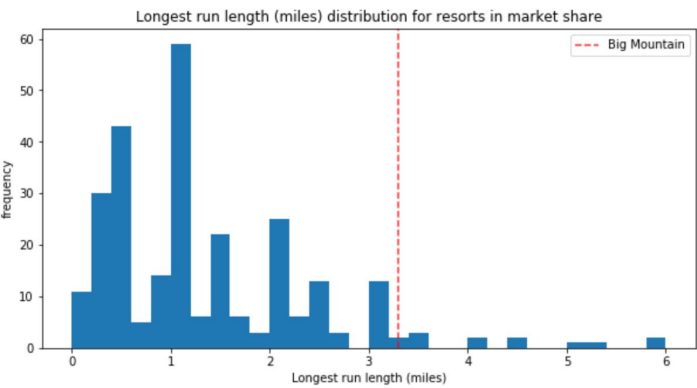


Big Mountain's total number of fast quads is approximately 3 fast quads amongst all the resorts.



Big Mountain's total number of runs is approximately 102 runs amongst all the resorts.

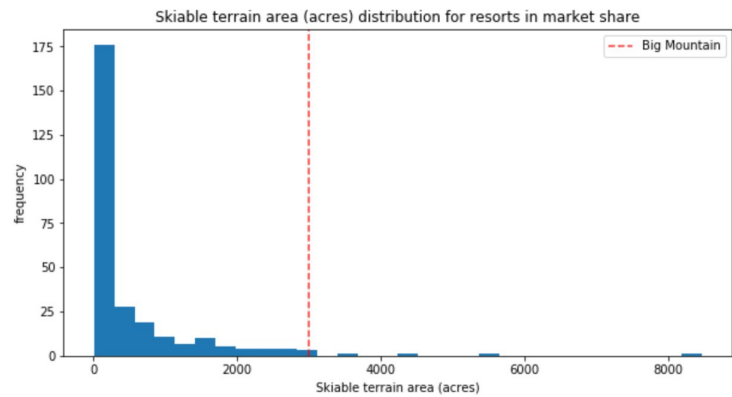
Modeling Results and Analysis



Big Mountain's the longest run length is approximately 3.4 miles amongst all the resorts.



Big Mountain's number of trams is 0 tram amongst all the resorts.



Big Mountain's skiable terrain area is approximately 3000 acres amongst all the resorts.

Summary and Conclusion

- We recommend that Big Mountain should increase the ticket price by \$13; therefore, it should charge \$94.22 for a ticket price since it could support Big Mountain's facilities in the marketplace.
- Besides, we suggest Big Mountain add two runs, increase the vertical drop by 150 feet, install an additional chair lift, and add 2 acres of snow-making cover for one season to see the revenue changes. Suppose Big Mountain sees the benefits in supporting the ticket price by doing so, and more importantly, the revenue is still performing well. In that case, Big Mountain should consider adding four runs, increasing the vertical drop by 300 feet, installing two additional lifts, and adding 4 acres of snow-making cover in the following season.