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Big Mountain Resort Report:

Problem Statement

Big Mountain Resort has struggled to find an appropriate pricing strategy for their tickets, worried they might not be capitalizing on its facilities as much as they could. They hope to gain some insight into how they can use data-driven strategies to price their facilities.

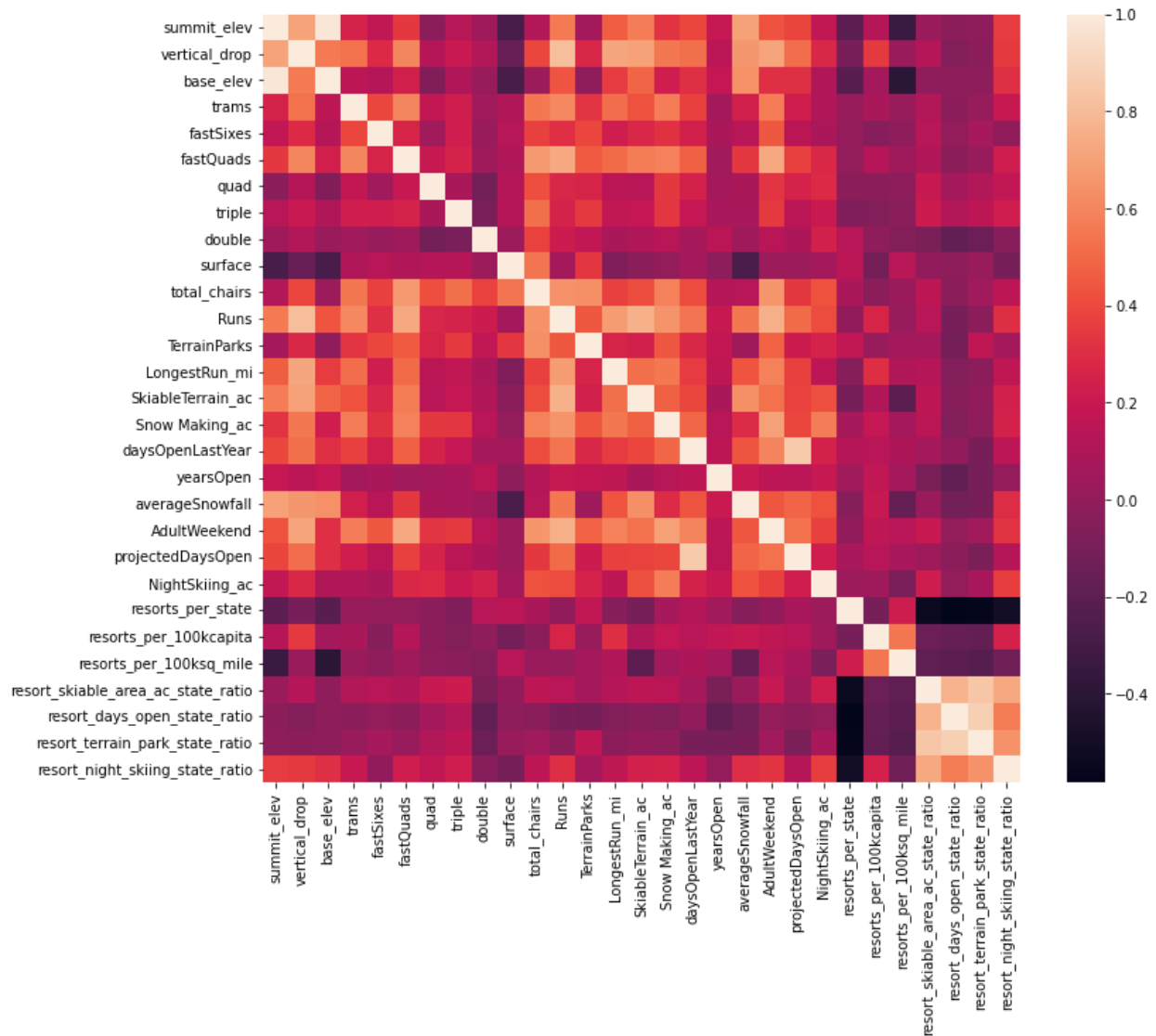
Current Pricing Strategy

The resort's current pricing strategy has been to charge a premium above the average price of resorts in its market segment.

Initial Findings

While prepping our data for model analysis, we did some rough rudimentary analysis along the way and found some initial thoughts. When analyzing Montana's Weekend and Weekday prices we found that many of Montana's resorts had no difference between the two which could be a cause for a lower amount of customers on Weekdays if the price is the same as the Weekend. Big Mountain can potentially attract more customers if they lower Weekday prices incentivizing customers. In the end, we eventually dropped Weekday prices due to missing values which hurt future analysis that could be done to improve Big Mountain Resort's pricing strategy.

Furthermore we took a look at some correlations between some features using some heatmap analysis and found that summit and base elevation had high correlation meaning vertical drop could be a selling point to raise ticket prices. Other interesting points also came up such as Runs/Snow Making_ac, and Runs/total_chairs. Through these two correlations we can see people value guaranteed snow and getting as many runs in as possible. Both of these require additional costs to implement but could be valuable strategies if the costs are worth.

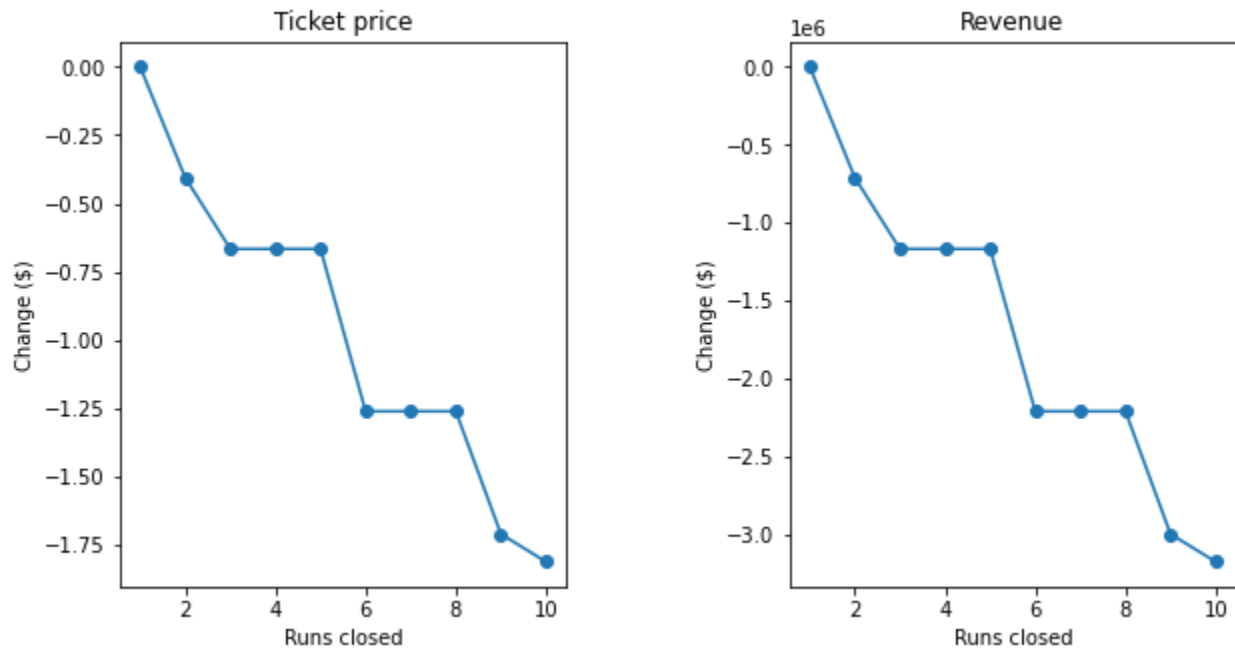


Modeling

When it came to modeling, Big Mountain Resort offered some shortlisted options:

1. Permanently closing down up to 10 of the least used runs. This doesn't impact any other resort statistics.
2. 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
3. Same as number 2, but adding 2 acres of snow making cover
4. Increase the longest run by 0.2 mile to boast 3.5 miles length, requiring an additional snow making coverage of 4 acres

In regards to Scenario 1, we found removing 1 run would make no difference in regards to ticket pricing and successfully reduces operating costs proving to be an invaluable option. Any more runs closed down after 1 seem to reduce revenue and support for ticket pricing but without operating costs in our model it becomes hard to tell the differential in loss revenue and reduced operating costs we would have. So closing 1 run seems to be the best option.



In regards to Scenario 2, increasing vertical drop would support a ticket price increase of \$8.61 and an increase in revenue of about \$15,065,471 with only 1 additional chairlift being installed.

In regards to Scenario 3, increasing snow making by 2 acres would support ticket price increase of \$9.90 and an increase of revenue of about \$17,322,717 with the additional cost of snow making equipment.

In regards to Scenario 4, increasing the longest run by 0.2 miles and guaranteeing 4 acres of snow making capability boasted no difference in price increase. This is NOT a recommended option.

Conclusion

Scenarios 2 and 3 seem to be the best options with both boasting over \$15-17 million dollars in increased revenue with little additional operating costs. Scenario 1 could be an option too as closing down 1 run seems to reduce a bit of operating costs with no ticket price decrease but without

operating costs in regards to runs, it becomes hard to tell if closing down more than 1 run could be recommended.