

Problem Statement Worksheet (Hypothesis Formation)

What different strategies exist to select the best value for ticket prices at Big Mountain Resort this season based on available facilities compared to neighboring resorts?

H

1 Context

Big Mountain Resort recently installed an additional chair lift to help increase the distribution of visitors across the mountain. Current ticket prices are based off a premium of market average of resorts in their segment, however they feel their is a better way to go about this based on available facilities to further drive revenue.

2 Criteria for success

Identify facilities that are used the most and find correlations between them. See if their is an opportunity to charge premiums based on use of facilities. Review ticket prices of neighboring resorts and understand the facilities they have. Is there a correlation between amount of runs/ chairlifts and price.

3 Scope of solution space

Explore ticket pricing at neighboring resorts and see what facilities they have and how it correlates to ticket pricing.

4 Constraints within solution space

Intangible reasons for increased ticket prices at certain resorts (views, location, hospitality, etc.)

5 Stakeholders to provide key insight

Director of Operations - Jimmy Blackburn
Alesha Eisen - Database Manager

6 Key data sources

CSV file containing data on facilities for 300 other resorts around the US.

H

D

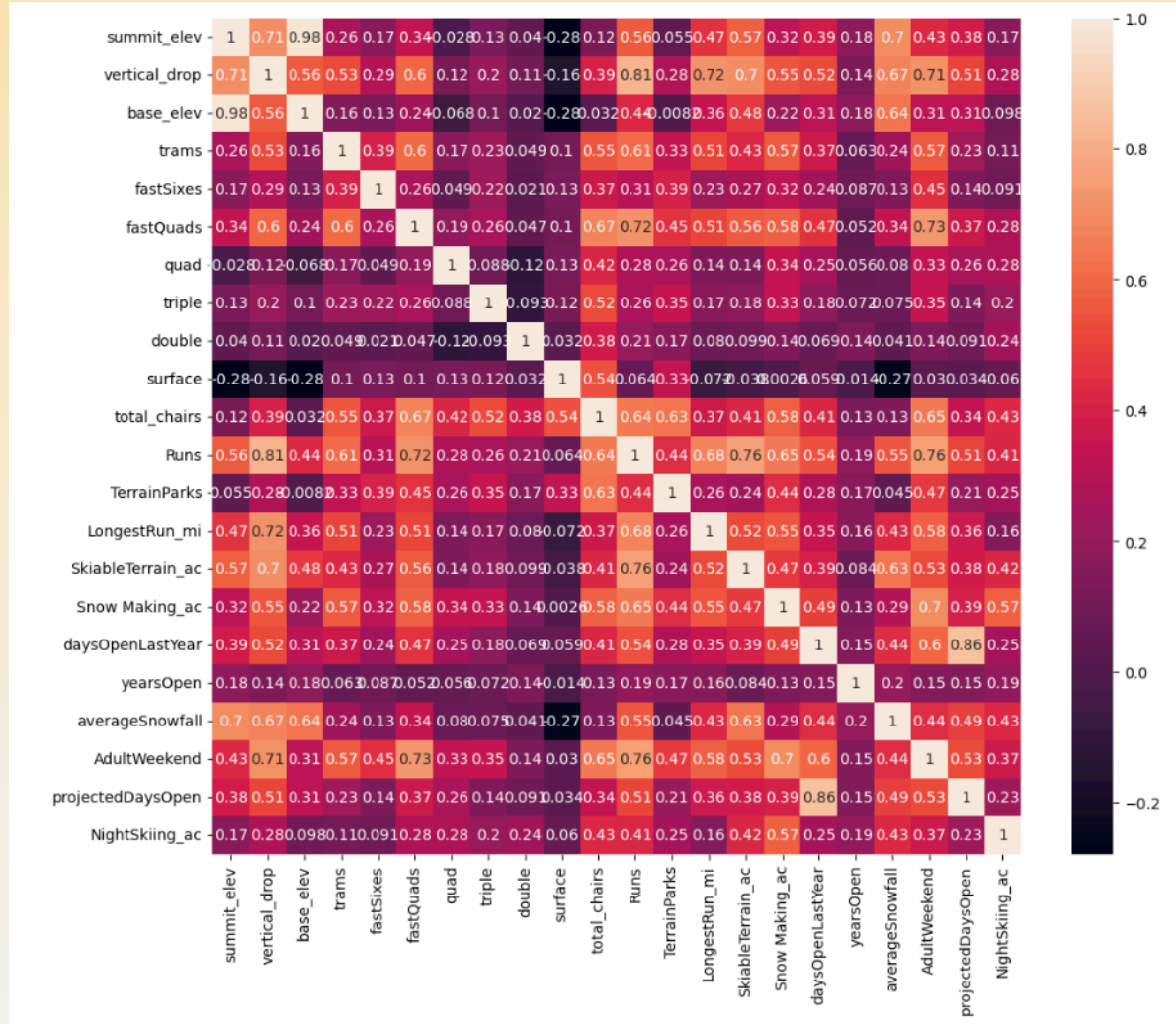
E

I

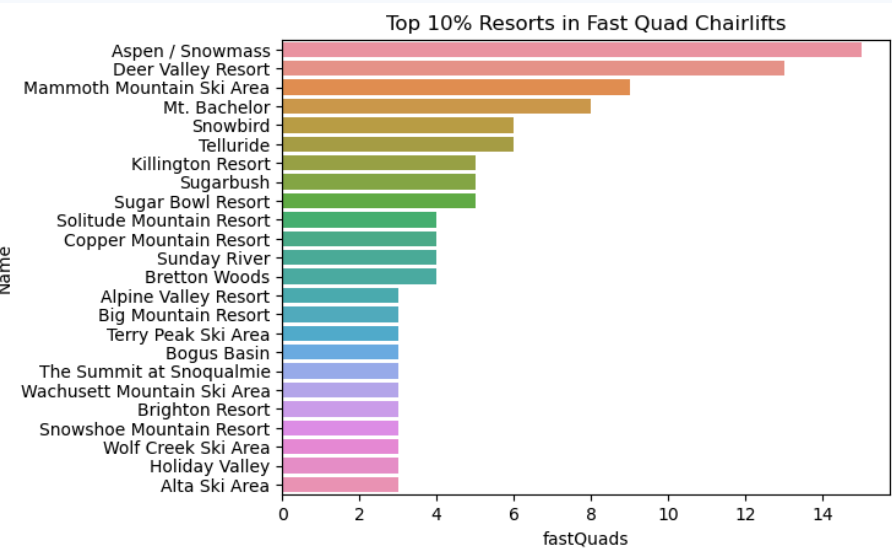
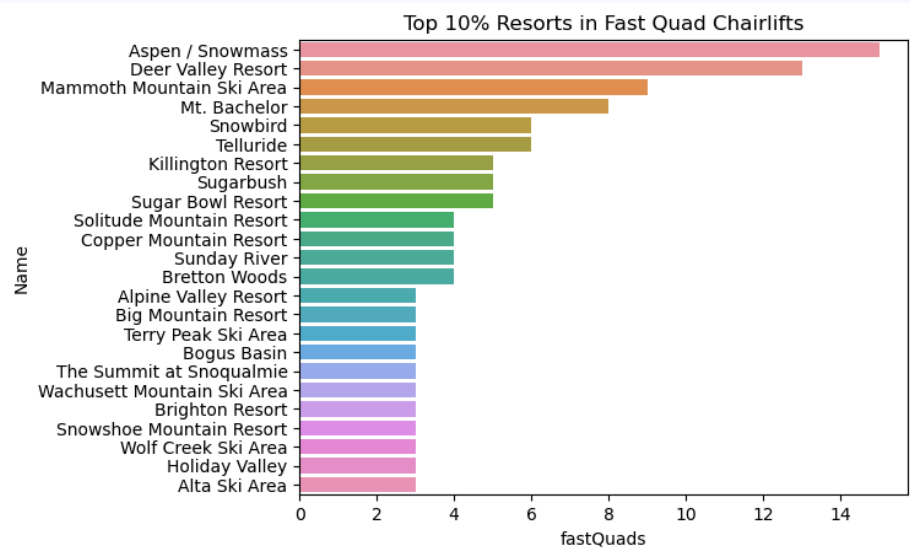
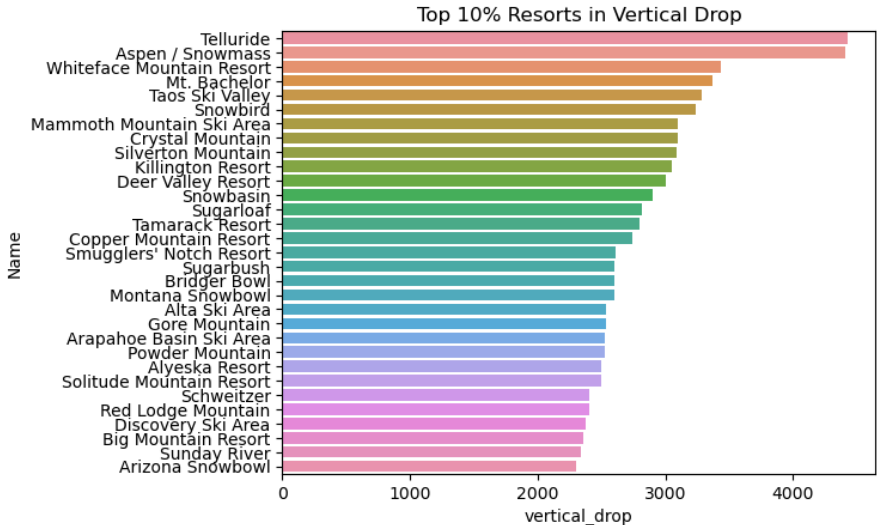
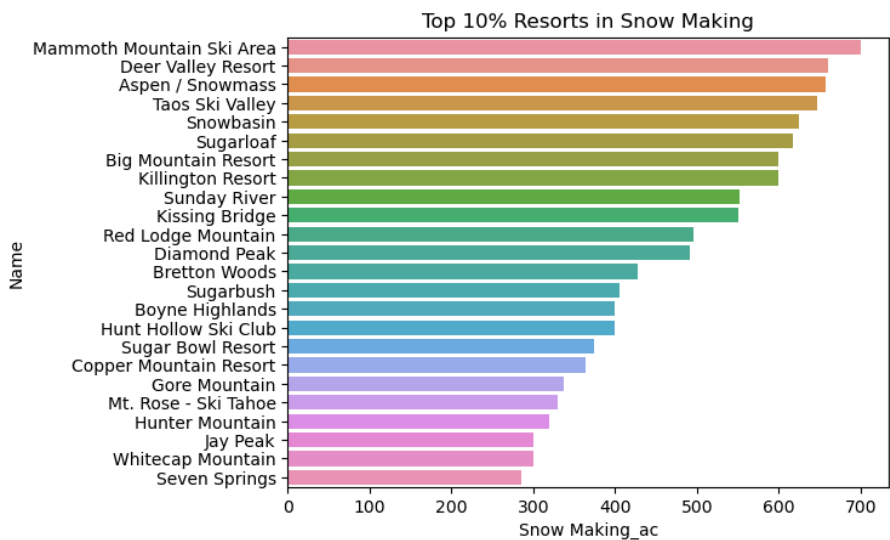
P

Key Findings

- This heatmap shows the correlation between each variable in the dataset
- Helps identify which features correlate with ticket price
- Some strongly correlated features include Vertical Drop, Fast Quads, Runs, and Snow Making AC.
- This allows us to begin evaluating Big Mountains key features and see how it stacks up against neighboring resorts and their ticket prices



Big Mountain Resort Key Features Relative to Competitors



Model Results

Notes:

- Tested models using mean and median strategies for imputing missing values
- Ran through various scenarios to determine ticket price movement based on key feature manipulation
- Determined average increase in ticket prices and approximate total revenue increase over a years time
- Where applicable, number of tickets assumed as an average of 350,000 visitors a year, each purchasing 5 tickets

Scenarios:

- Close the top 10 least used runs
 - Results: On average closing down approximately 4 or 5 runs leads to a relatively nominal drop in ticket prices with a large drop off after that
 - Cost savings closing 4 or 5 runs likely does not justify the reduction in ticket price revenue
- Add a run and increase the vertical drop by 150ft
 - Results: Expect to see an average ticket price increase of \$9.26 and additional annual revenue of \$16,208,333
- Add a run and increase the vertical drop by 150ft and add 4 acres of snow making
 - Results: Average ticket price increase of \$12.07 and additional annual revenue of \$21,125,000
- Increase the longest run by .2 miles and add 4 acres of snow making capabilities
 - Results: No difference whatsoever

Summary and Recommendation

- In conclusion, Big Mountain Resort is one of the largest resorts landing in the top 10% in almost all key features that drive ticket pricing.
- We believe adding run that will increase the vertical drop by 150ft while increasing snow making capabilities provides Big Mountain Resort the most justification for increasing ticket prices.
- With this strategy implemented, Big Mountain Resort can increase ticket prices approximately \$12 with an expected increase in annual revenue of \$21M.