

# Project Overview and Recommendations

Big Mountain Ski Resort

**Presented by**

Miranda Haynes

# Content

An abstract graphic on the left side of the slide, consisting of a dense trail of small, light-colored dots or particles that curve from the top left towards the bottom right, creating a sense of motion or a path.

1 Problem Identification



2 Key Findings



3 Modeling Results



4 Analysis and Recommendations

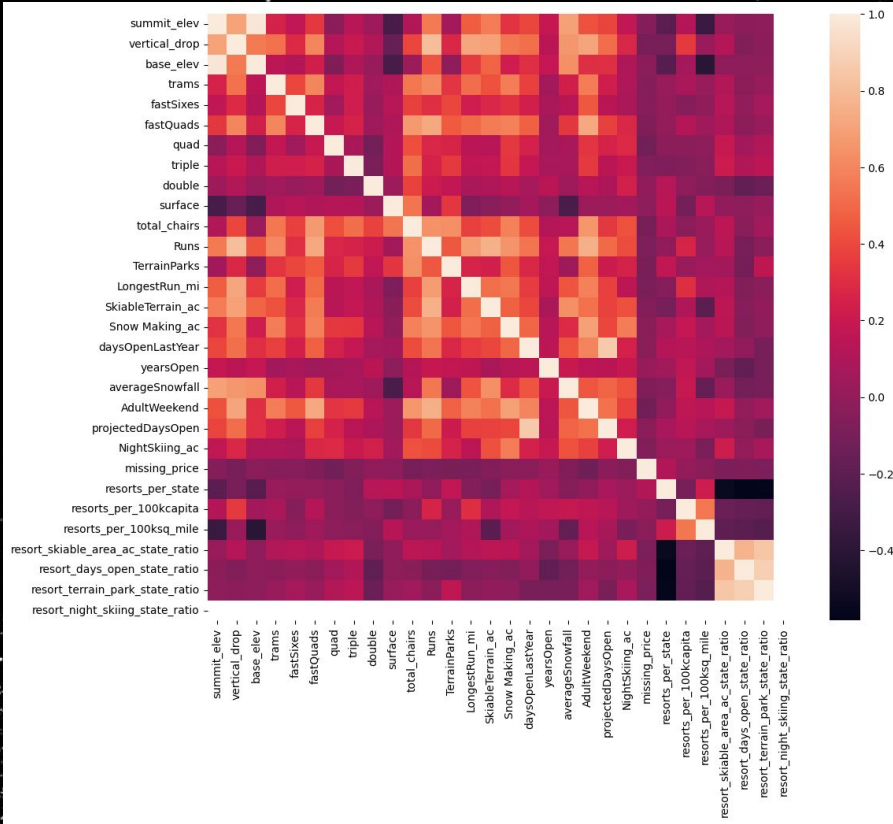


5 Summary



Big Mountain Ski Resort aims to identify and optimize key features to maximize seasonal revenue.

## Key Findings



Heat map of  
feature  
relationships

## Features

- Highly profitable resort features
  - Vertical Drop
  - Total chair lifts
  - Snow making
  - Number of runs
  - Length of longest run
  - Accessibility to nearby parks
- Features that do not impact pricing
  - Night skiing
  - Total days open
  - Trams

# Modeling

Model objective: Determining how to adjust key features to maximize adult ticket prices.

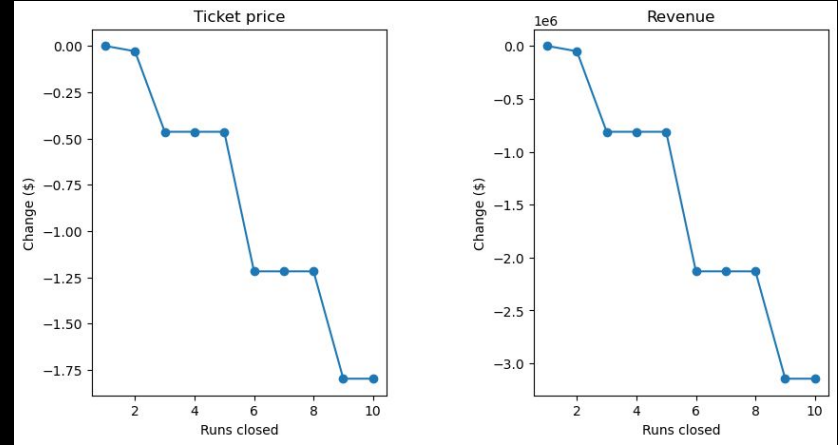
Type: Random Forest

Accuracy

- Linear model has higher variability
- Random forest has a lower mean absolute error

Key features determined by model

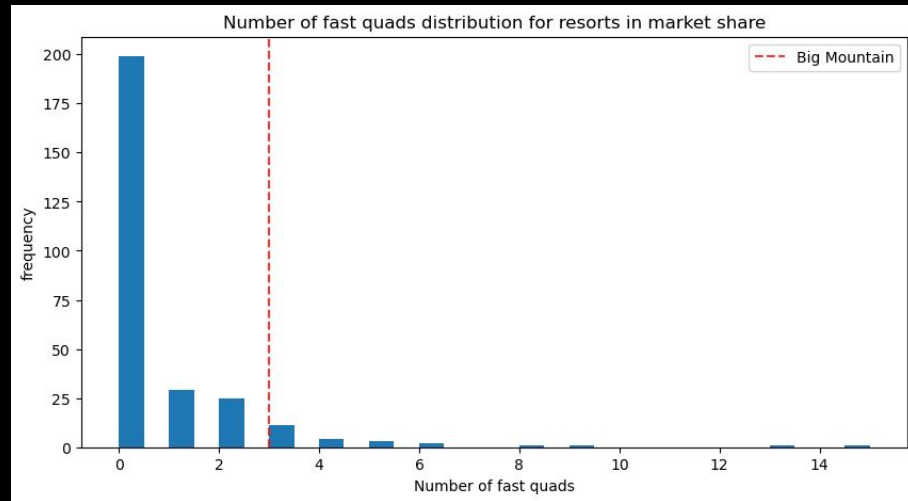
- Fast quads
- Snow making
- Runs
- Vertical Drop height



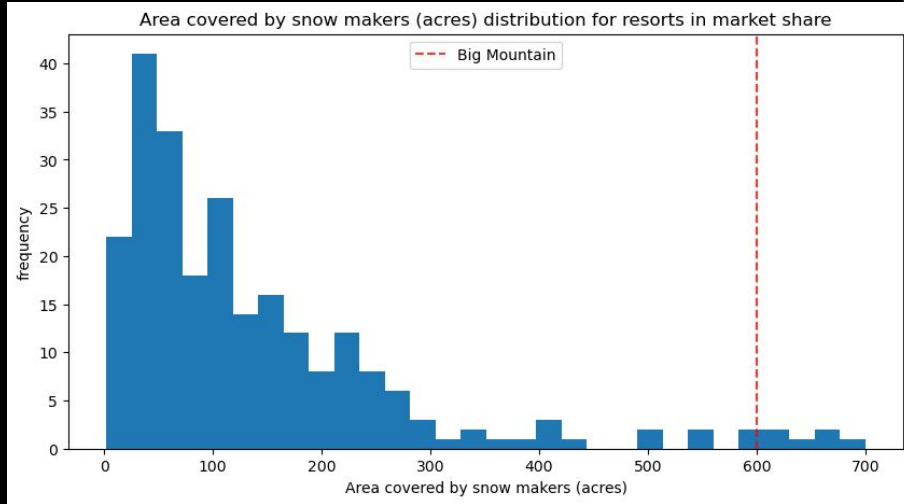
The graph shows how ticket price and seasonal revenue would be affected with each run being closed.

# Fast Quads' competitive advantage

- We have more fast quads than the regional average
- 3 fast quads sets us apart from competitors
  - The U.S. average is 0
- Adding more fast quads will not greatly impact ticket pricing
  - Operational costs would be greater than the additional revenue



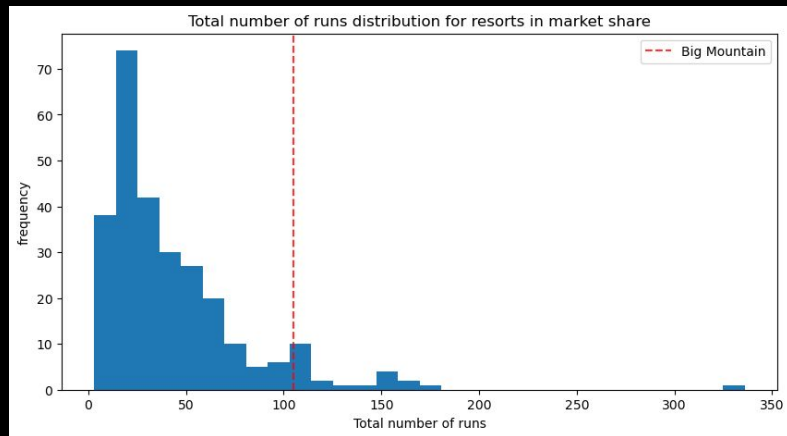
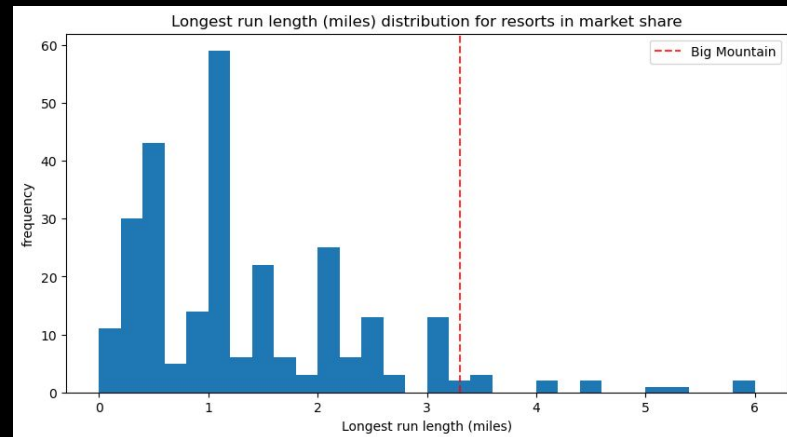
# Snowmaking capabilities



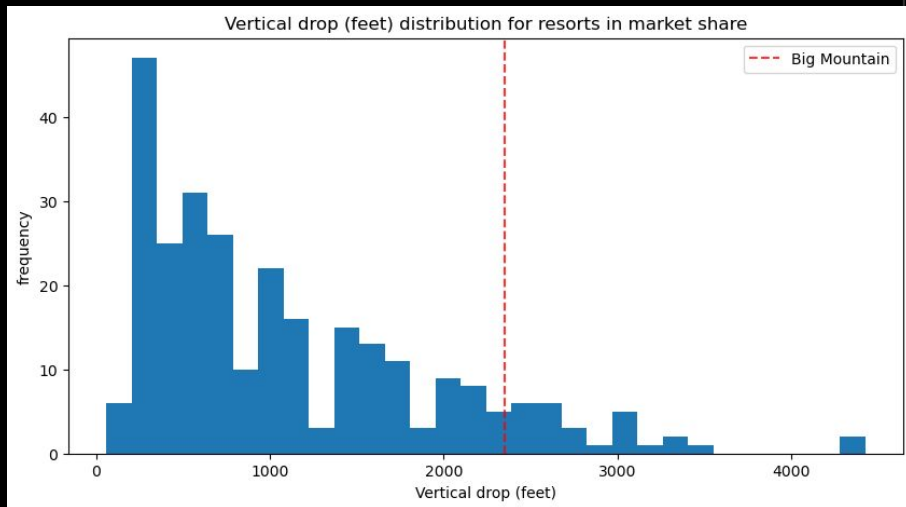
- Above average coverage
  - Big Mountain exceeds the average snow making in the U.S.
- Model Insight
  - A 2 acre increase shows no measurable impact on revenue
- Cost vs. Benefit
  - Operational costs would outweigh any gain in revenue, if any
  - Additional acreage, unless substantial, would offer no strategic advantage
- Current snow making capabilities are sufficient to support competitive pricing and guest satisfaction

# Optimizing Runs

- Highly competitive feature
  - We are above average in both total number of runs and longest run length
- Closing 1-4 runs will not impact ticket prices
  - More than 6 leads to a steep decrease in ticket price and seasonal revenue
- Model Insight
  - Increasing the longest run by 0.2 miles does not significantly impact ticket pricing
  - It would be better to remove less than 5 low traffic runs to save on maintenance without sacrificing guest experience







# Vertical Drop Height

- Standing
  - Big Mountain is above average in this feature, but there is room for growth
- Model Insight
  - Increasing vertical drop height by 150 feet will increase ticket prices by \$1.68
    - \$3 million in additional revenue seasonally
- Larger height increase
  - Increasing vertical drop height by 300 feet would more than double the listed seasonal revenue increase
    - Strongly suggests a large investment in this feature
- Considerations
  - Maintenance costs
  - Safety risks
  - Environmental impact

# Analysis and Recommendation

Our model evaluated 4 key features; fast quads, vertical drop height, snow making area, and runs, to determine impact on seasonal revenue and ticket prices. Removing a few underused runs and increasing vertical drop heights would increase revenue the most. Expanding vertical drop height increases ticket pricing, while selectively removing the runs will decrease operational and maintenance costs.

# Summary

- Big Mountain is a well positioned resort with many 'above average' features
- Modeling shows the most effective improvements are increasing vertical drop height and closing underused runs
- All features listed are highly profitable but snowmaking and fast quads are already optimized
- Following suggested adjustments offers the most returns without sacrificing guest experience and requiring significant financial investment



# Thank you