# Big Mountain Resort Pricing Analysis

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The Pricing Problem at Big Ski Mountain

What opportunities exist for Big Mountain Resort to effectively make data-driven decisions about ticket prices and implement a new pricing strategy ?
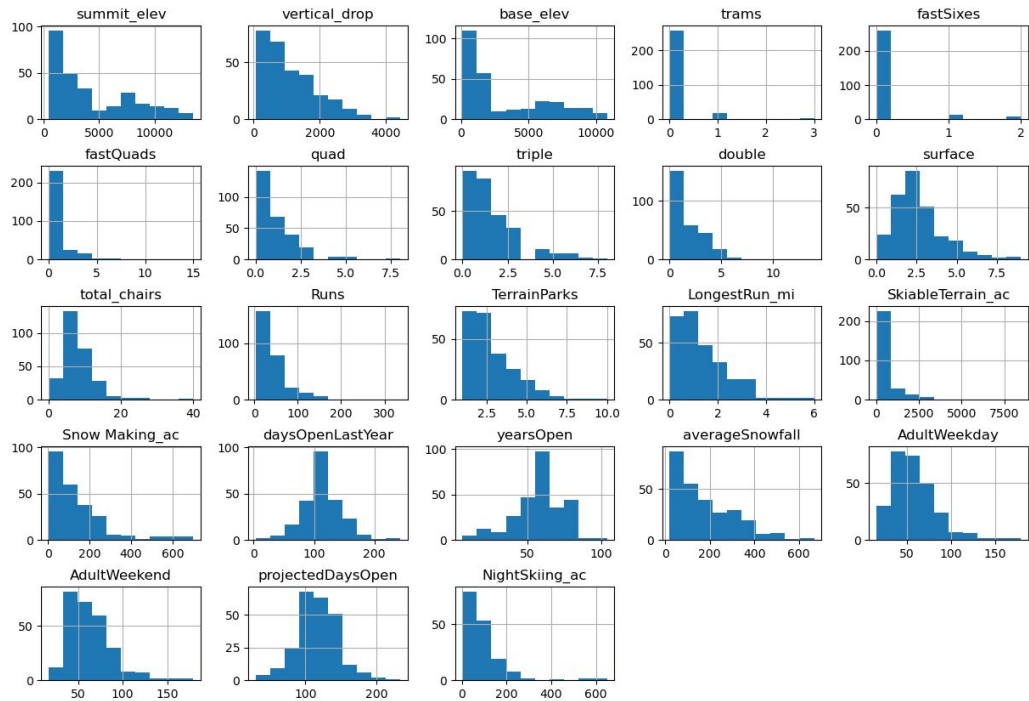
Big Mountain Resort currently bases their pricing mainly putting a small premium on just the market average.

This won't be enough to maximize their capitalization investment and can't be sustainable to gain an edge over the competition.

Average ticket price by State
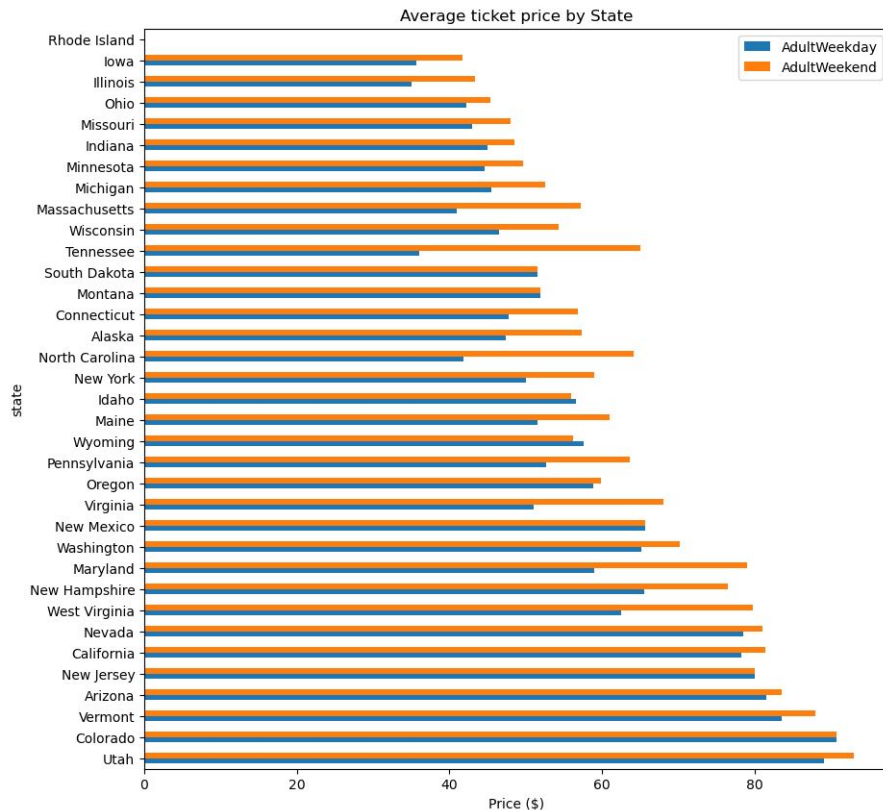
Modeling the Problem and Finding Solutions

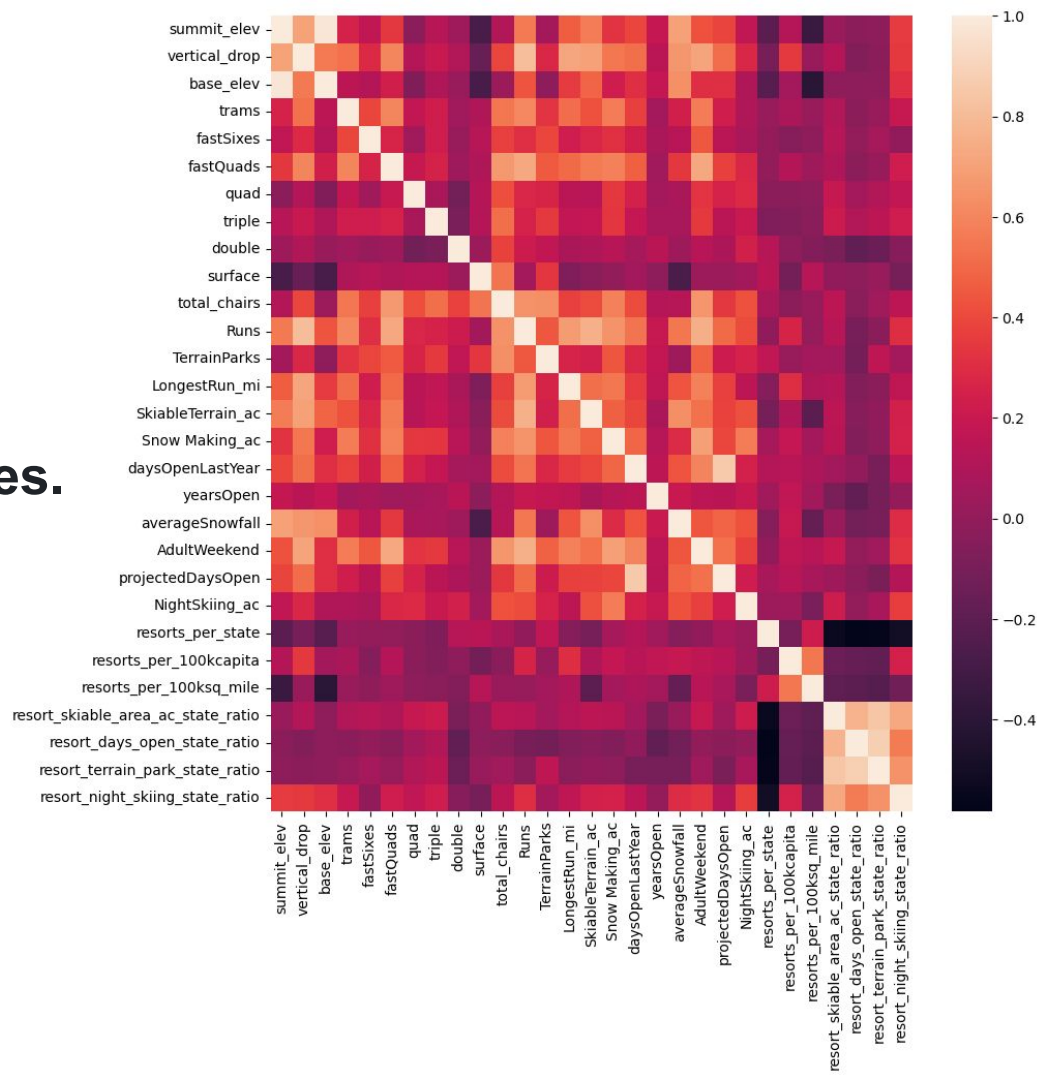**Distribution of different features**

Feature Engineering

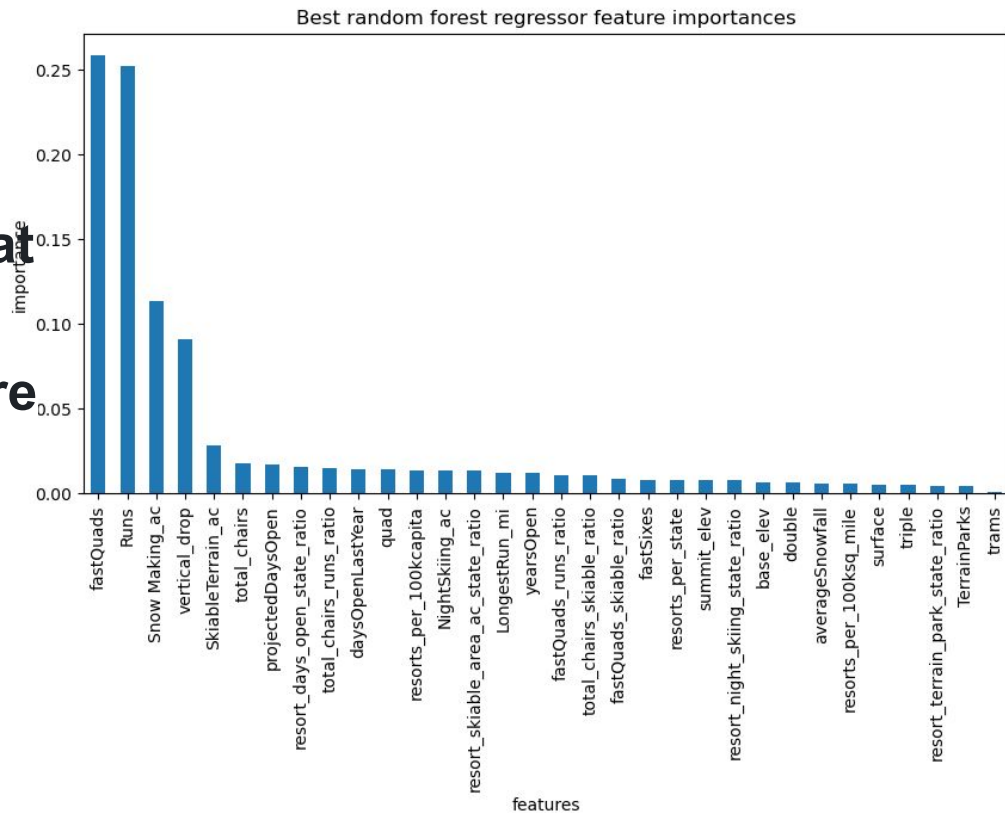**Correlation heat map to understand relations between features compared to ticket prices. The following stand out:**

1. **fastQuads**
2. **Runs**
3. **Snow Making_ac**
4. **Vertical Drop**
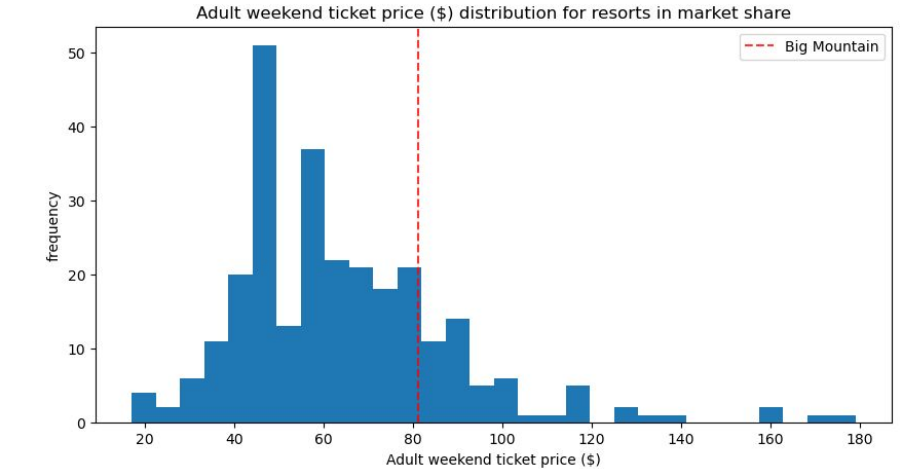5. **Longest Run in miles**
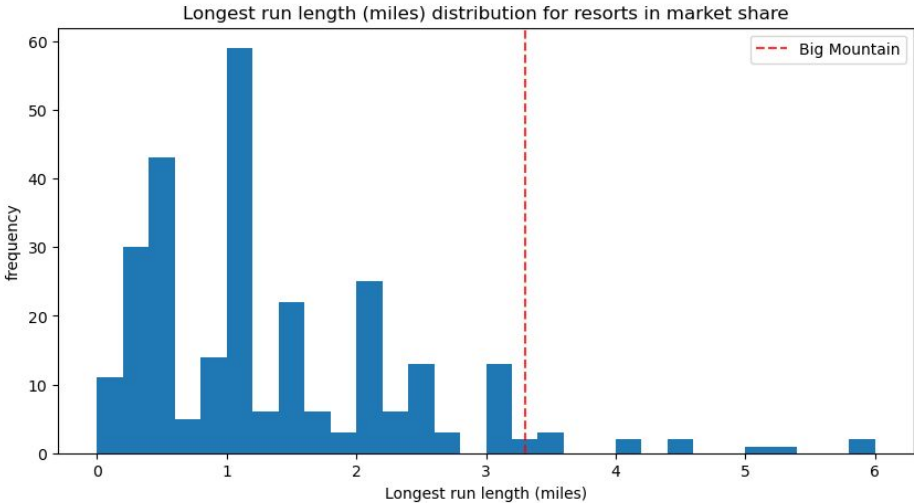
Modeling the Problem and Finding Solutions

The Random Forest Model performed better and revealed that fastQuads, Runs, Snow Making_ac, and vertical_drop were the most important features

Best random forest regressor feature importances

Big Mountain's ticket prices compared to other resorts

Adult weekend ticket price ($) distribution for resorts in market share

Big Mountain has one of the longest runs

Longest run length (miles) distribution for resorts in market share

Big Mountain's snow making area are among the highest

Area covered by snow makers (acres) distribution for resorts in market share
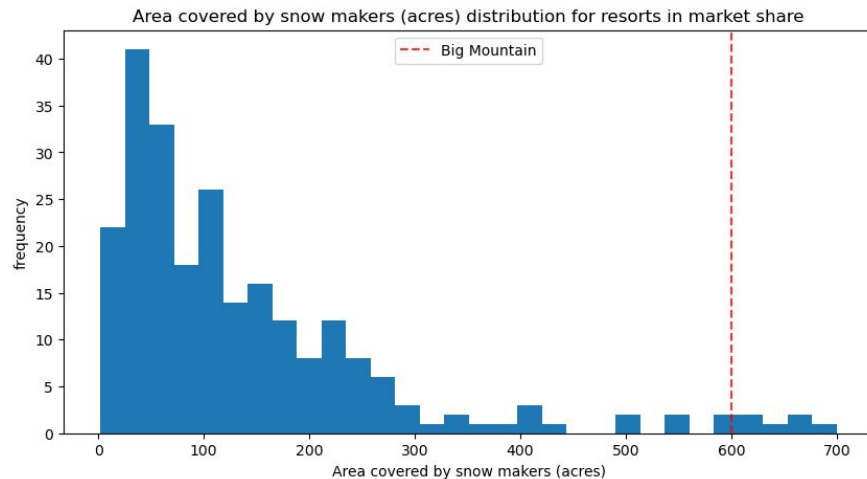
Big Mountain's number of runs are among the highest

Total number of runs distribution for resorts in market share
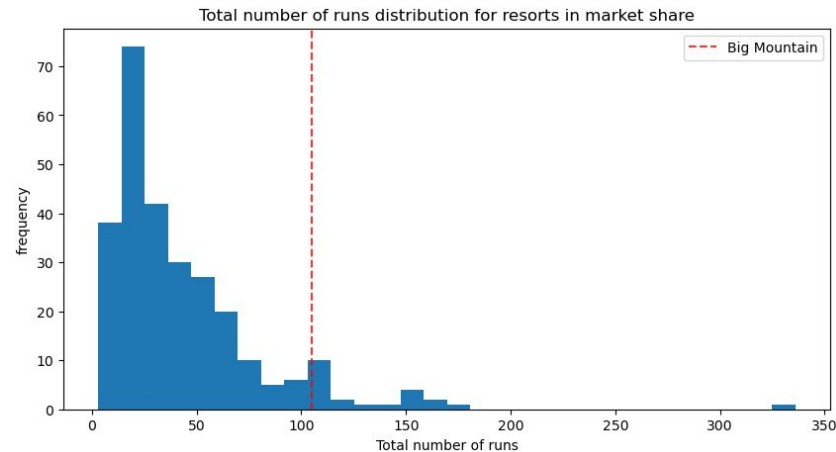
Recommendation and Key Findings

- Our Model suggests that Big Mountain Resort's ticket price is lower than the predicted model by 16.31%, and the resort have many potential scenarios for either cutting costs by closing runs or increasing ticket price by increasing vertical drop, adding acres snow making or increasing the longest run.
- This supports a price of increasing the price from currently at $81 to $95.87

Modifications to infrastructure and/or Usage

- Increasing the vertical drop by 150 ft would increase the ticket price by 10.44% from $81 to $89.46, resulting in revenue increase by $14,811,594.
- Adding 2 acres of snow making would increase the ticket price by 12% from $81 to $90.75, resulting in revenue increase by $17,068,841.
- Closing down 3 runs, it seems they may as well close down 4 or 5 as there's same loss in ticket price and revenue by $0.67 and $1.250M respectively.