Big Mountain Resort Pricing Strategy:
A data driven approach

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Problem Statement:

Big Mountain Resort is a ski resort located in Montana. The management team is interested in increasing revenue by increasing prices. The new pricing strategy must be data driven.

Problem Statement Context:

The pricing strategy of the resort is based on charging a premium above the average price of resorts in its market segment. Our data science team was brought in based on available market data of competitors. We are tasked with finding the optimal pricing strategy that will increase revenue. In other words we want to find the ticket prices that considers the resort's facilities relative to other resorts in the United States.
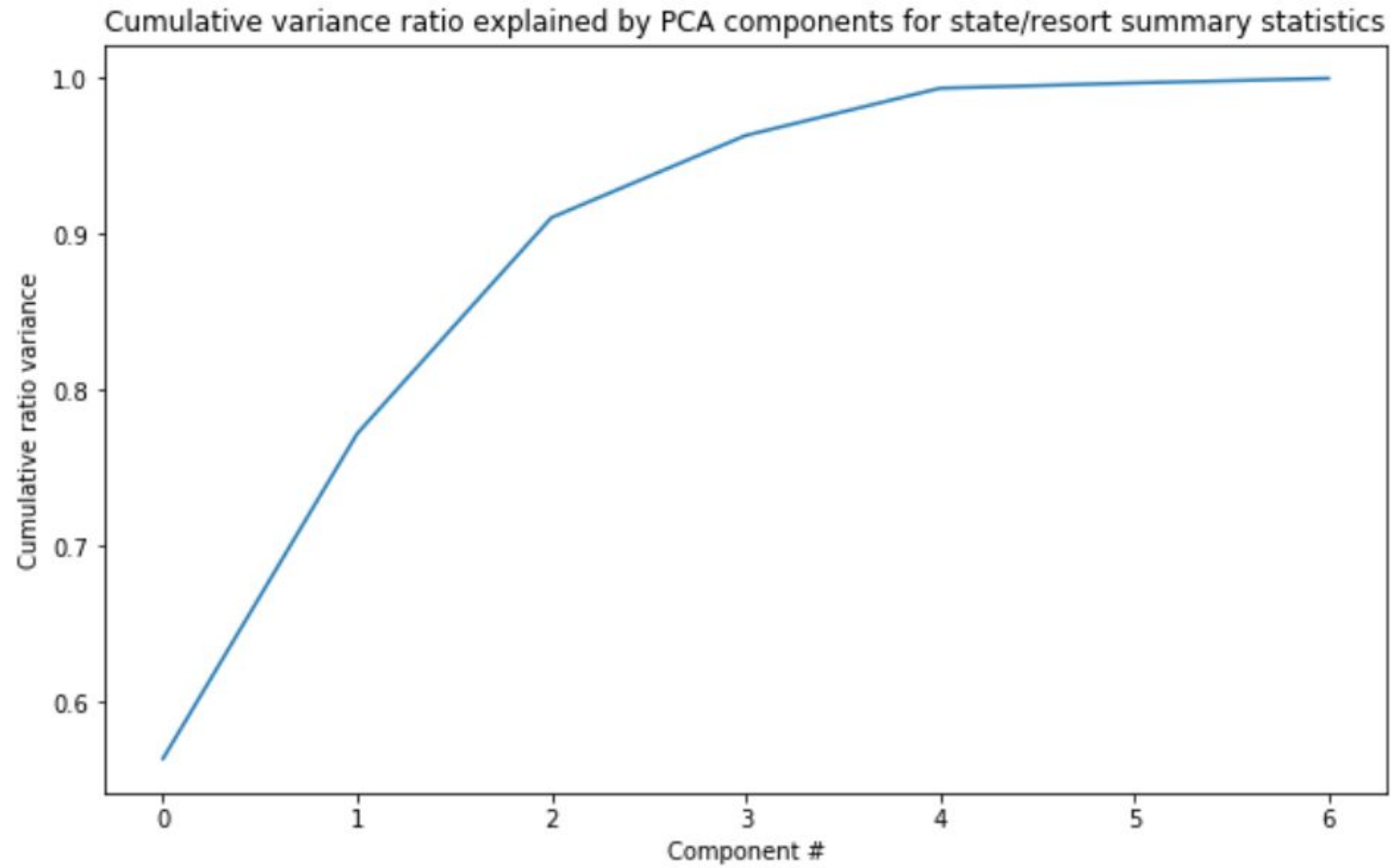
Recommendations and Key Findings:

- The Random Forest Model supports a price increase from $81 to $94.22 which equates to an increase in revenue of $4.6 MM based on expected number of visitors of 350,000.
- The most positively correlated features when it comes to the ticket in descending other are fast quads, Runs, Snow making capacity and vertical drop.
- The resort is already in the top quartile when it comes to these positively correlated features therefore, we conclude that relative to other resorts our current price is low and doesn't consider the facilities fully in the resort.
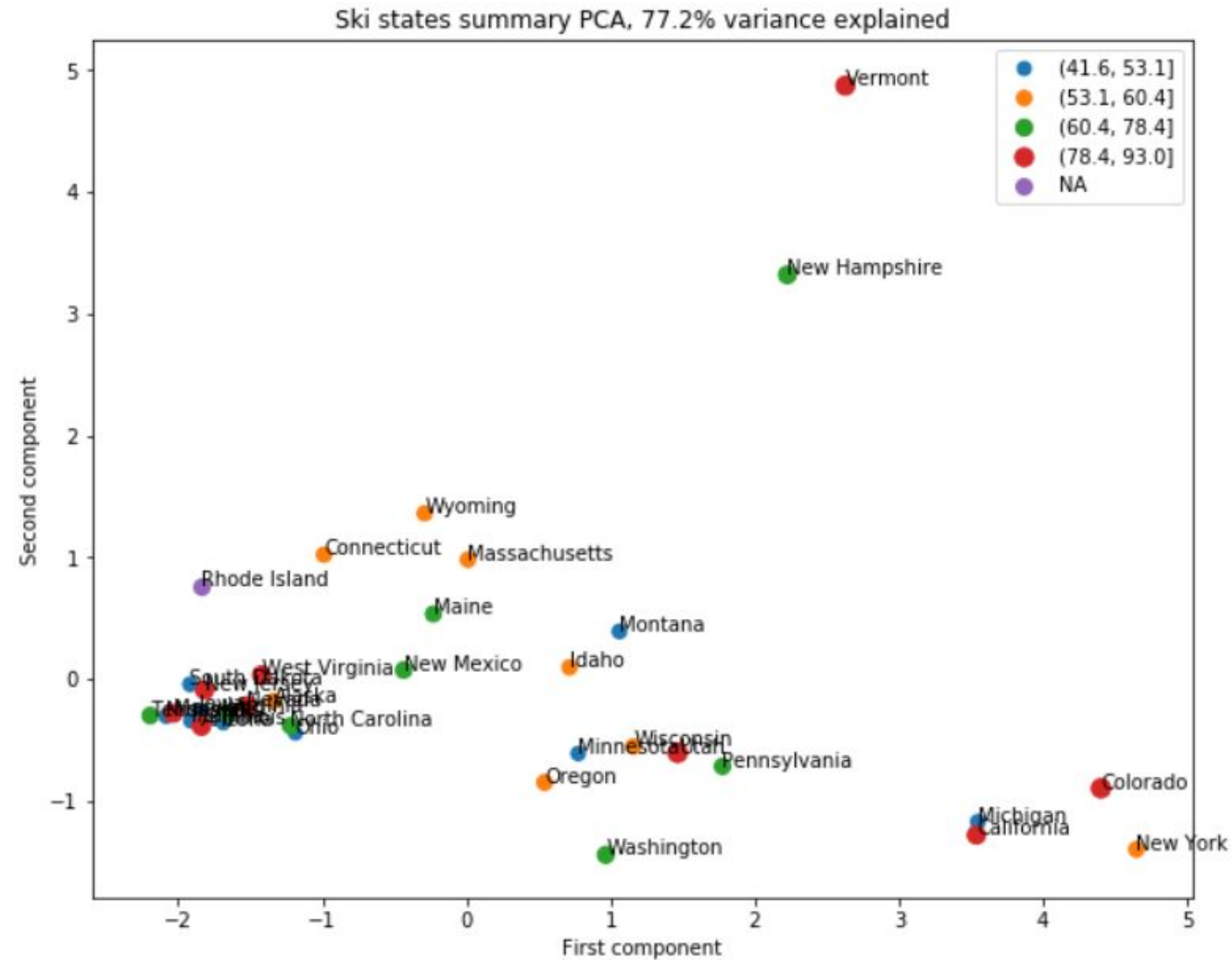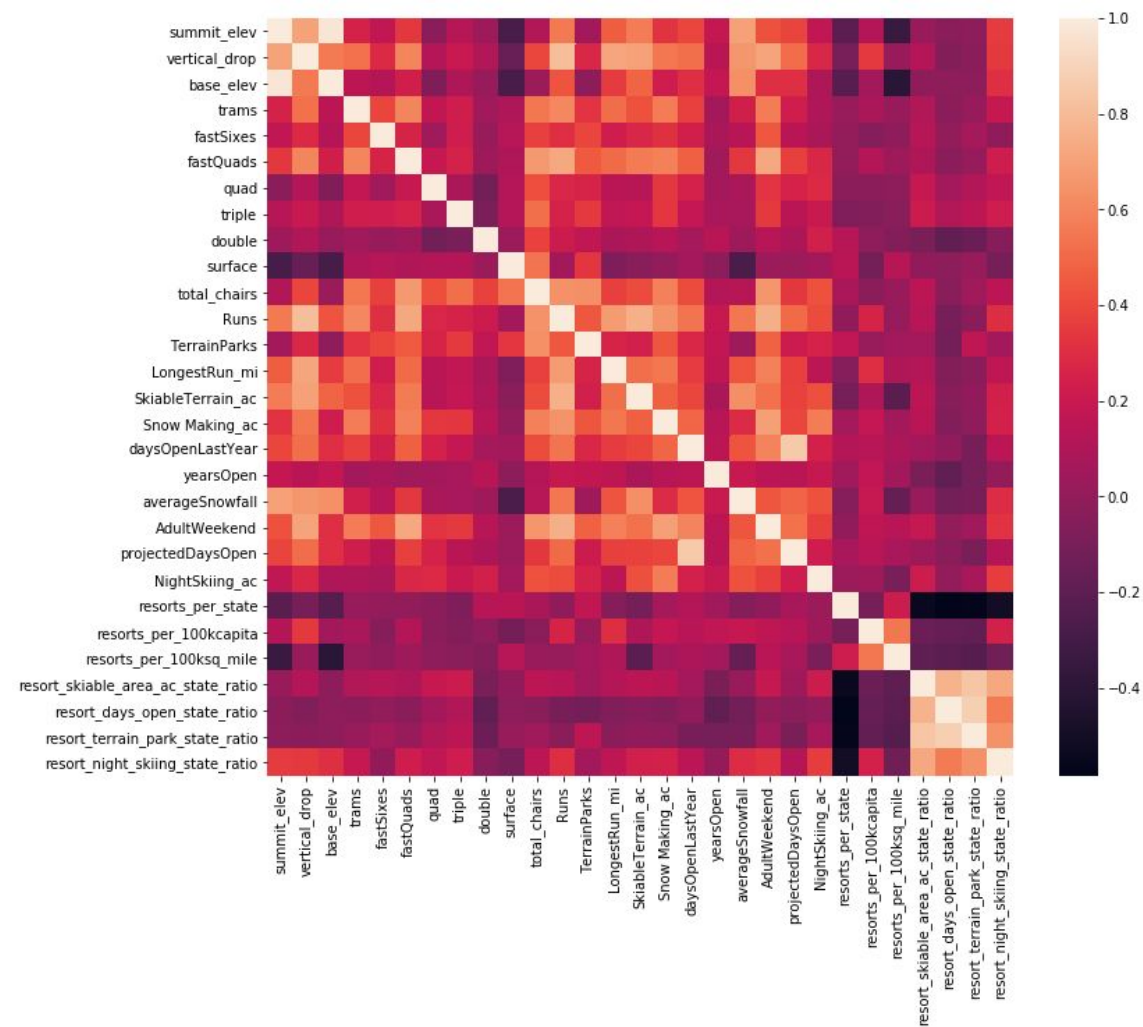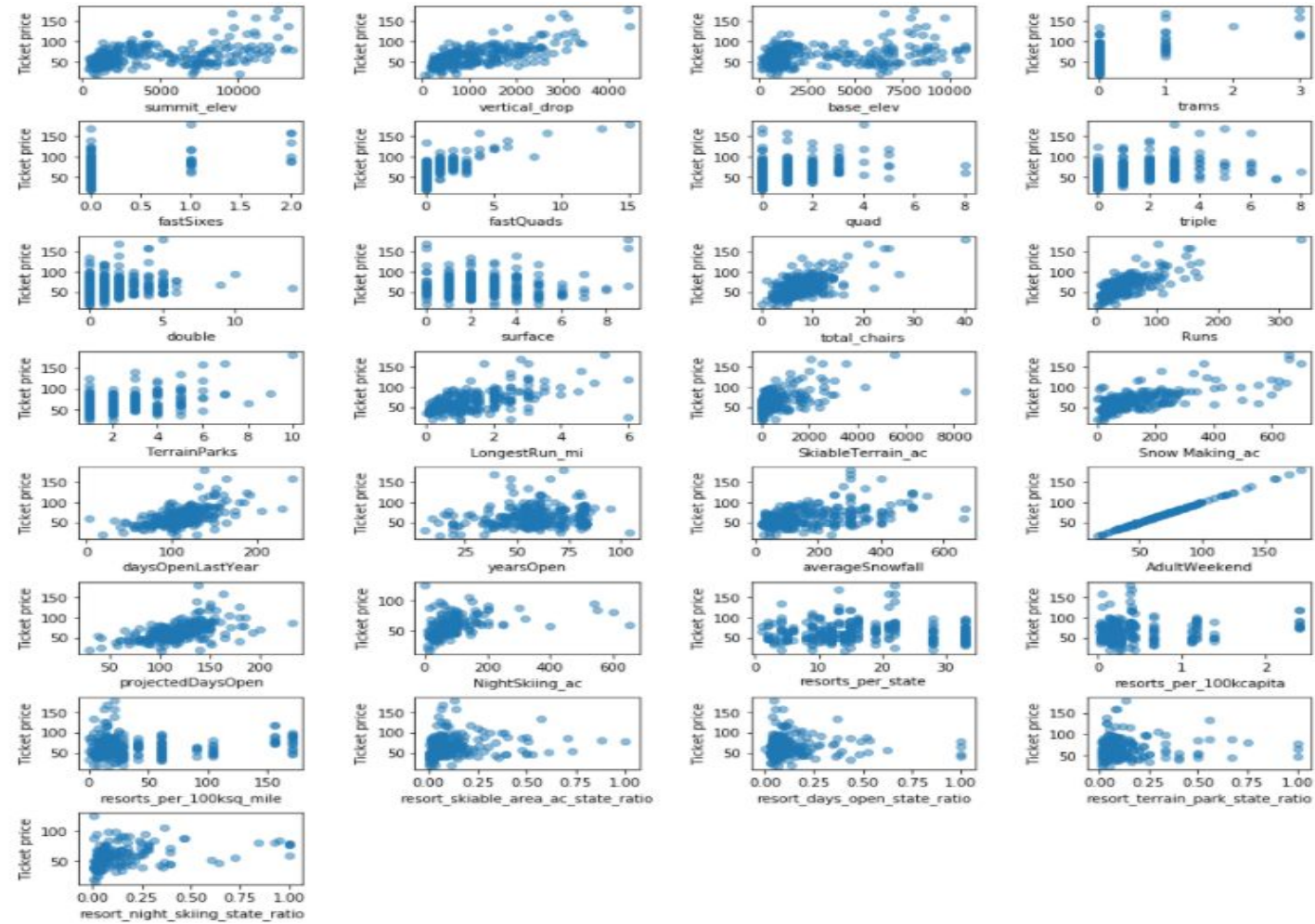
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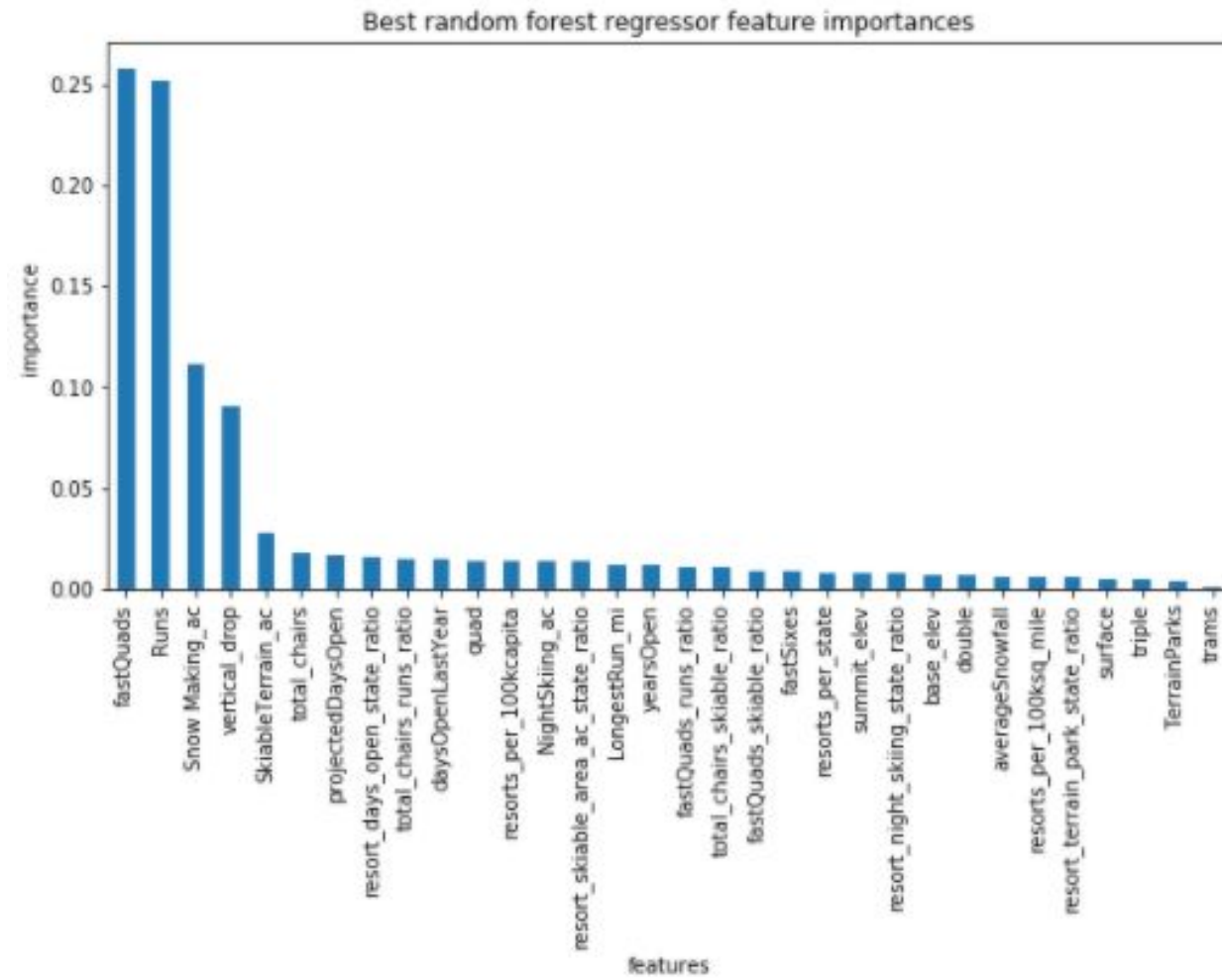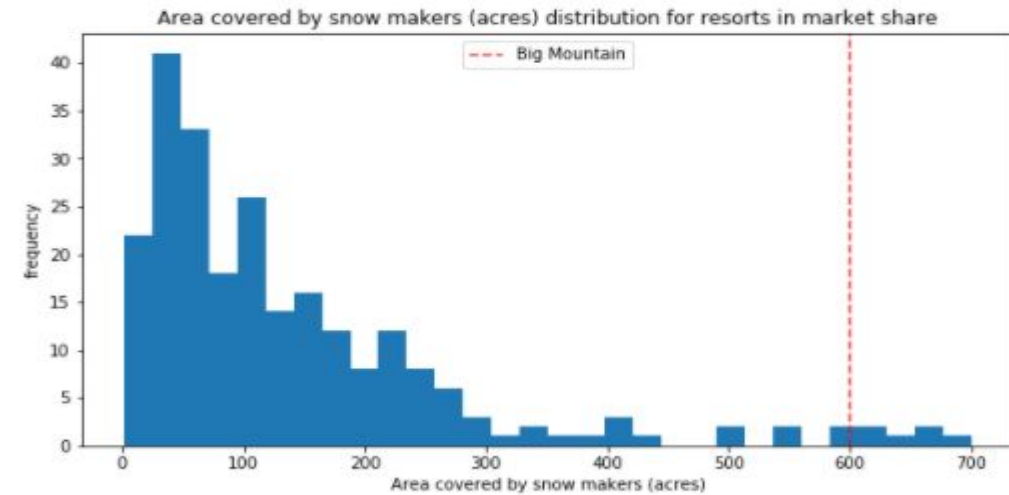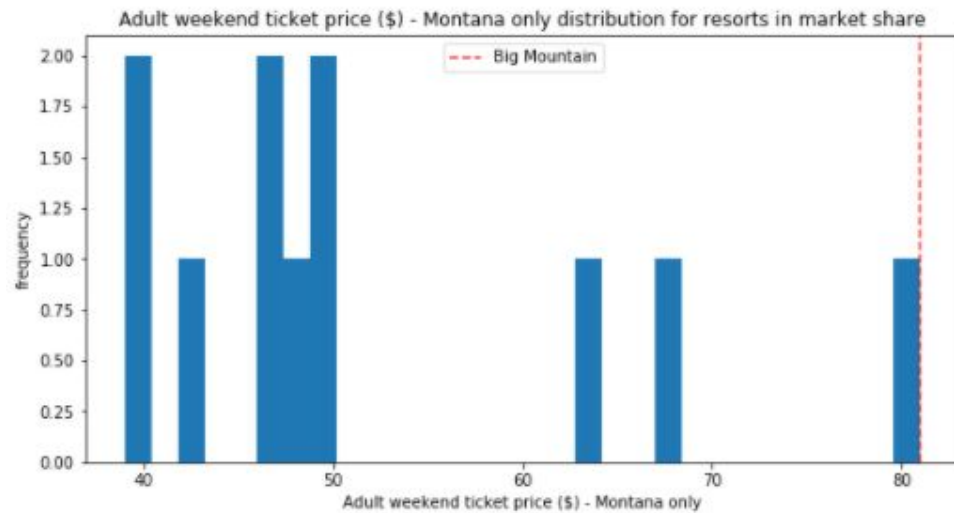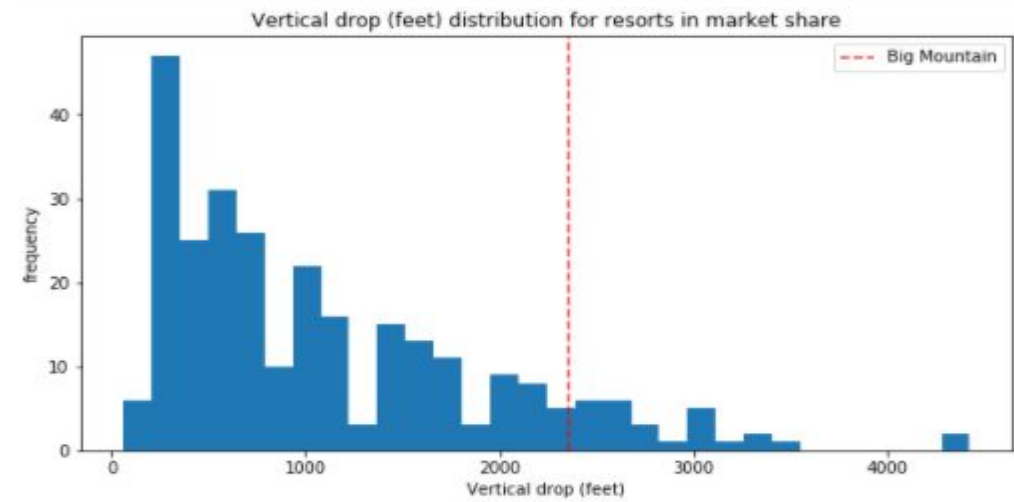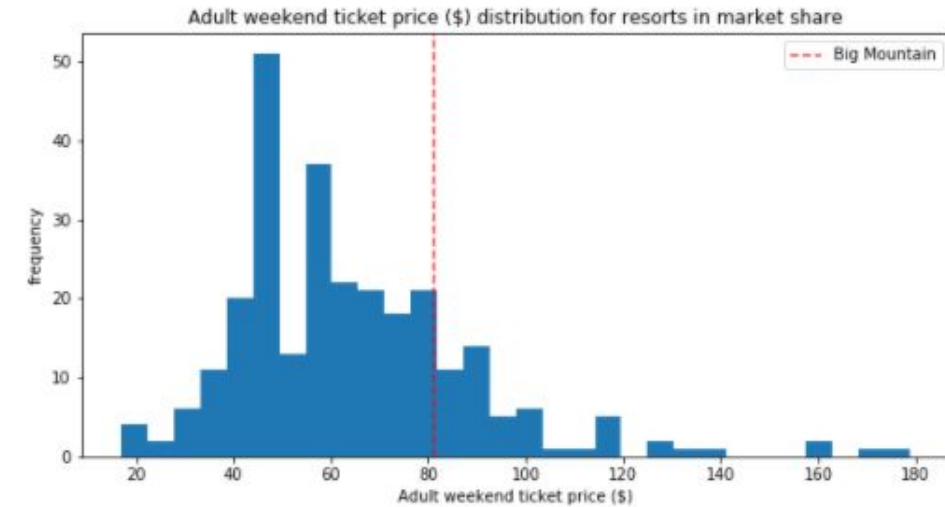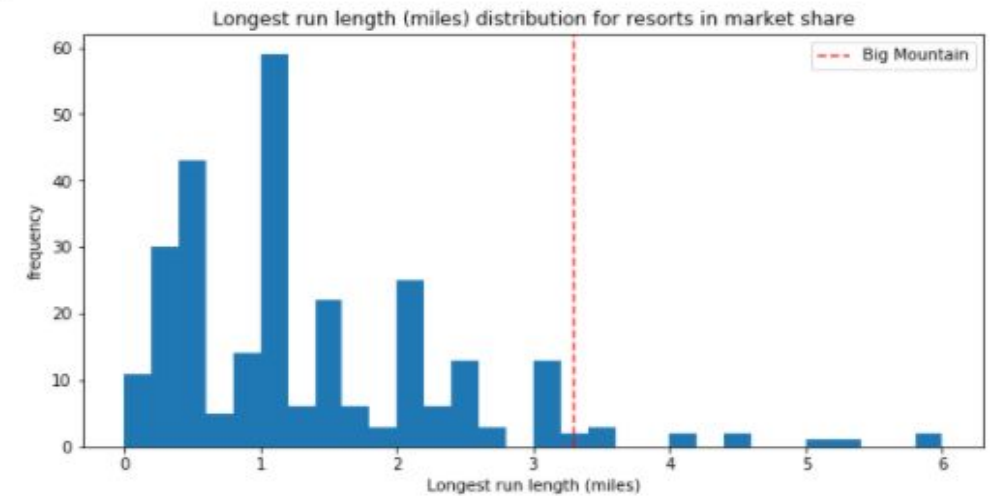
Modeling results and Analysis:

Cumulative variance ratio explained by PCA components for state/resort summary statistics
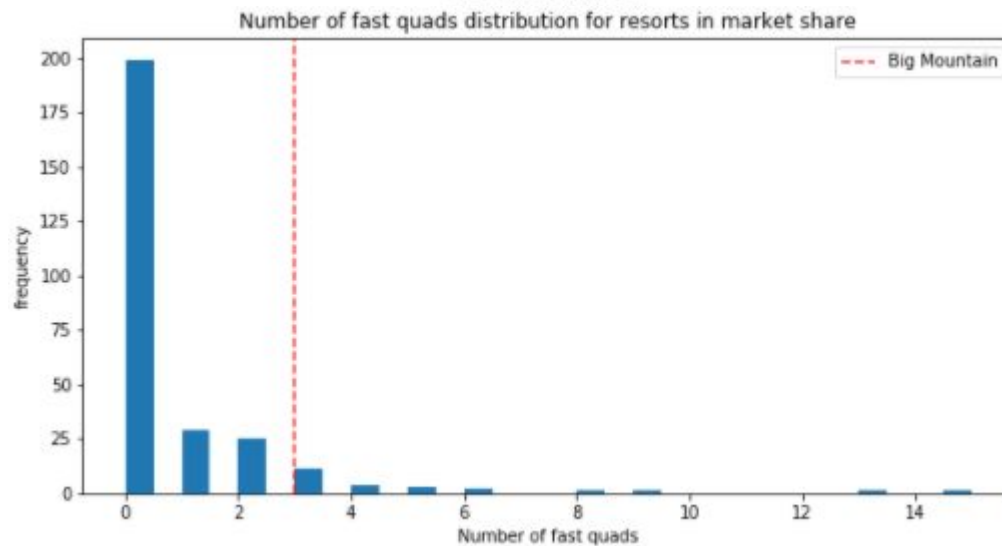
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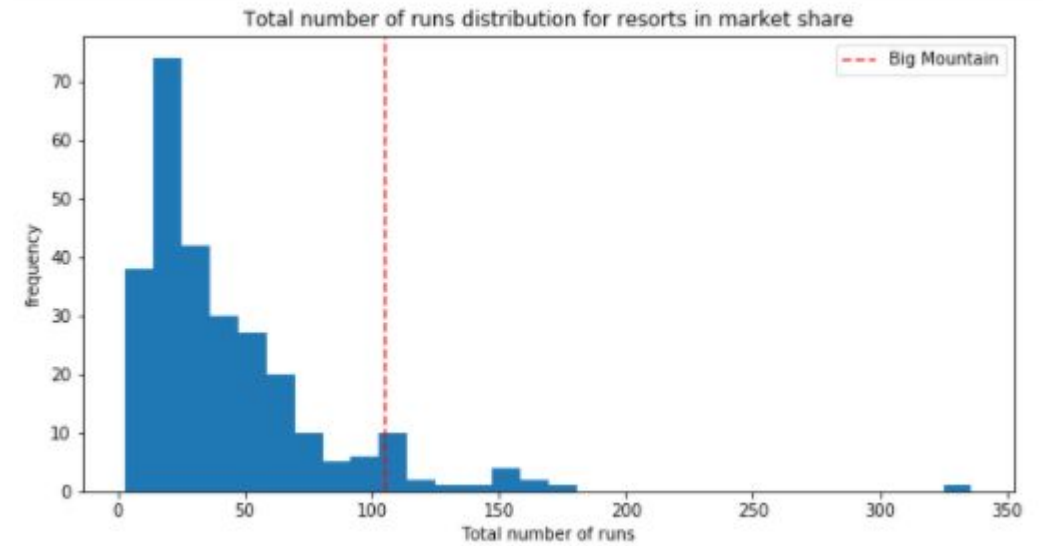

Ski states summary PCA, 77.2% variance explained

Modeling results and Analysis:

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Best random forest regressor feature importances
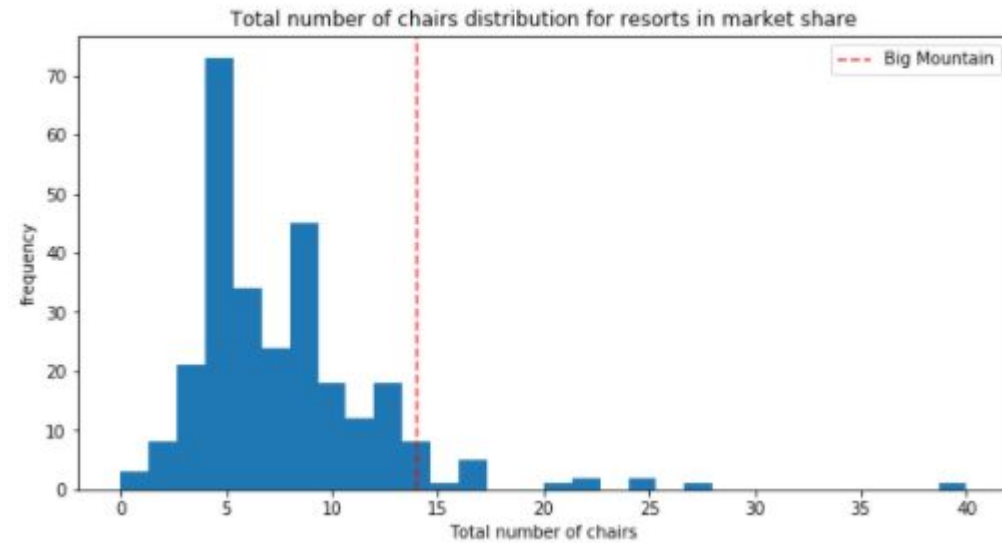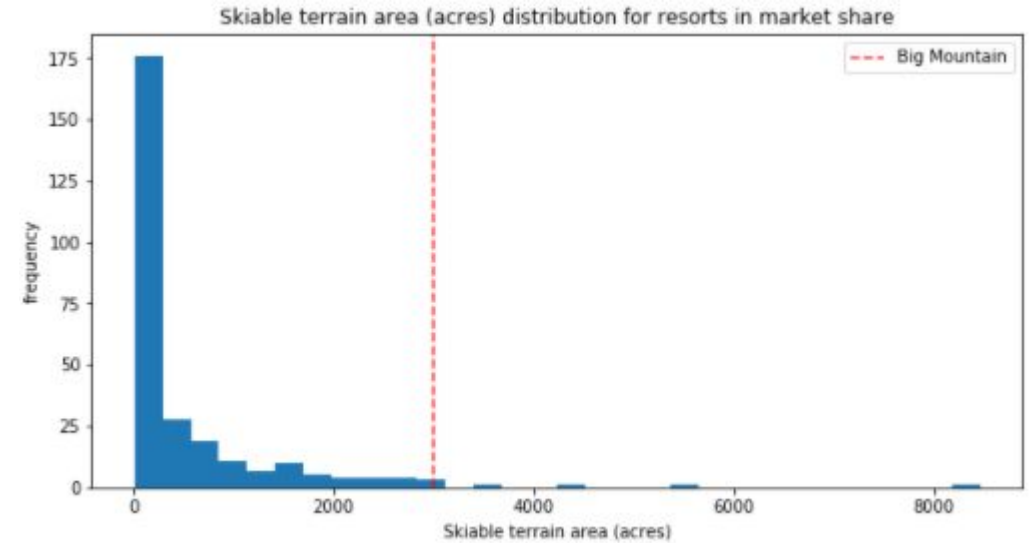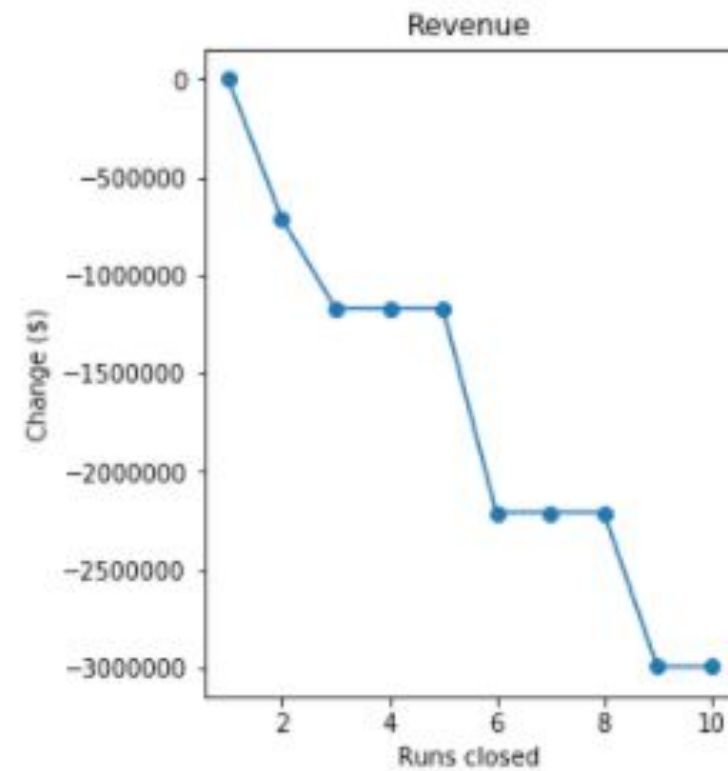
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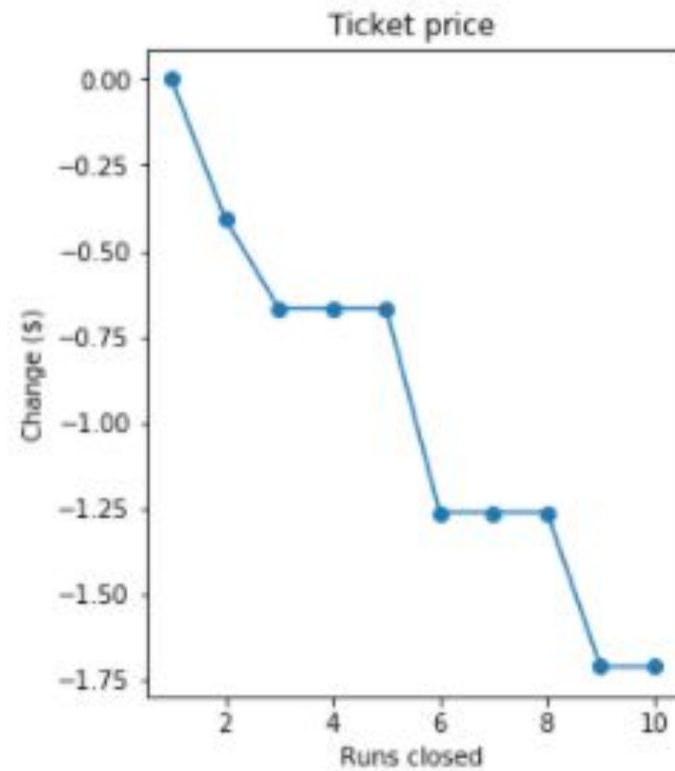
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Number of trams distribution for resorts in market share

Skiable terrain area (acres) distribution for resorts in market share
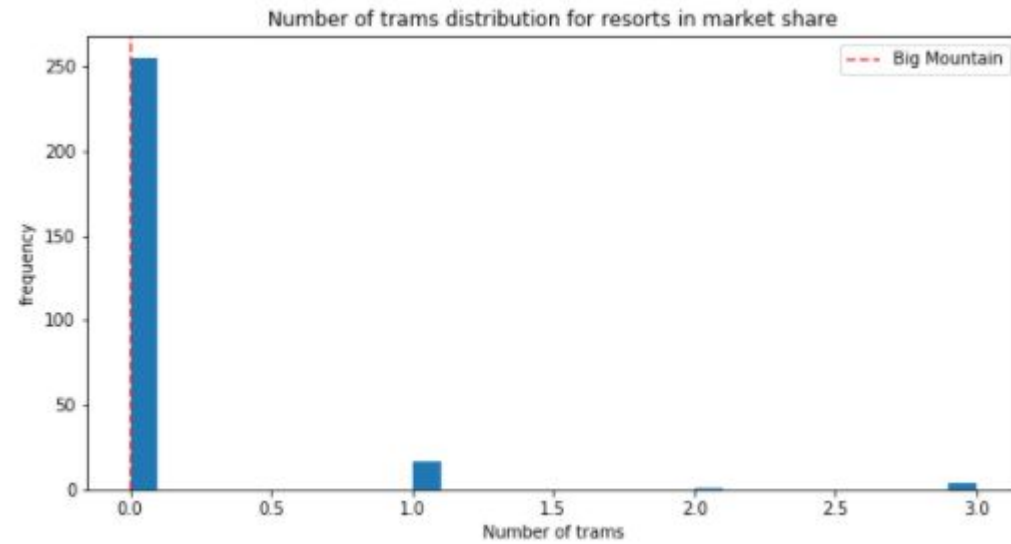
Modeling results and Analysis:

Summary and conclusion:

- The current ticket price is below true market price.

- Increasing the market price to $94.22 is supported by the analysis of available competitor data.

- If cost for each feature was available, we could further extend the analysis by showing the sensitivity of the revenue by increasing and decreasing the availability of each feature.