

Big Mountain Ski Resort

Pricing Model



Problem Identification

Problem Statement:

What opportunities exist for Big Mountain to increase revenue to meet the additional operating expenses of the additional chair lift by reevaluating ticket prices or by cutting costs before lift ticket prices are released for the next season?

Problem identification

Context:

- Addition of chair lift
- Previous pricing strategy was to charge a premium above the average price of resorts in market segment
- Not capitalizing on facilities
- Select a better value for ticket price
- Operational changes

Recommendation and Key Findings

Increase ticket prices:

- Market segment data suggest that that facilities at Big Mountain Resort can support a weekend lift ticket price of roughly \$96.

Operational changes:

- Increasing vertical drop without additional snow making increases support for ticket price by \$8.61 (\$15,065,471 over the season).

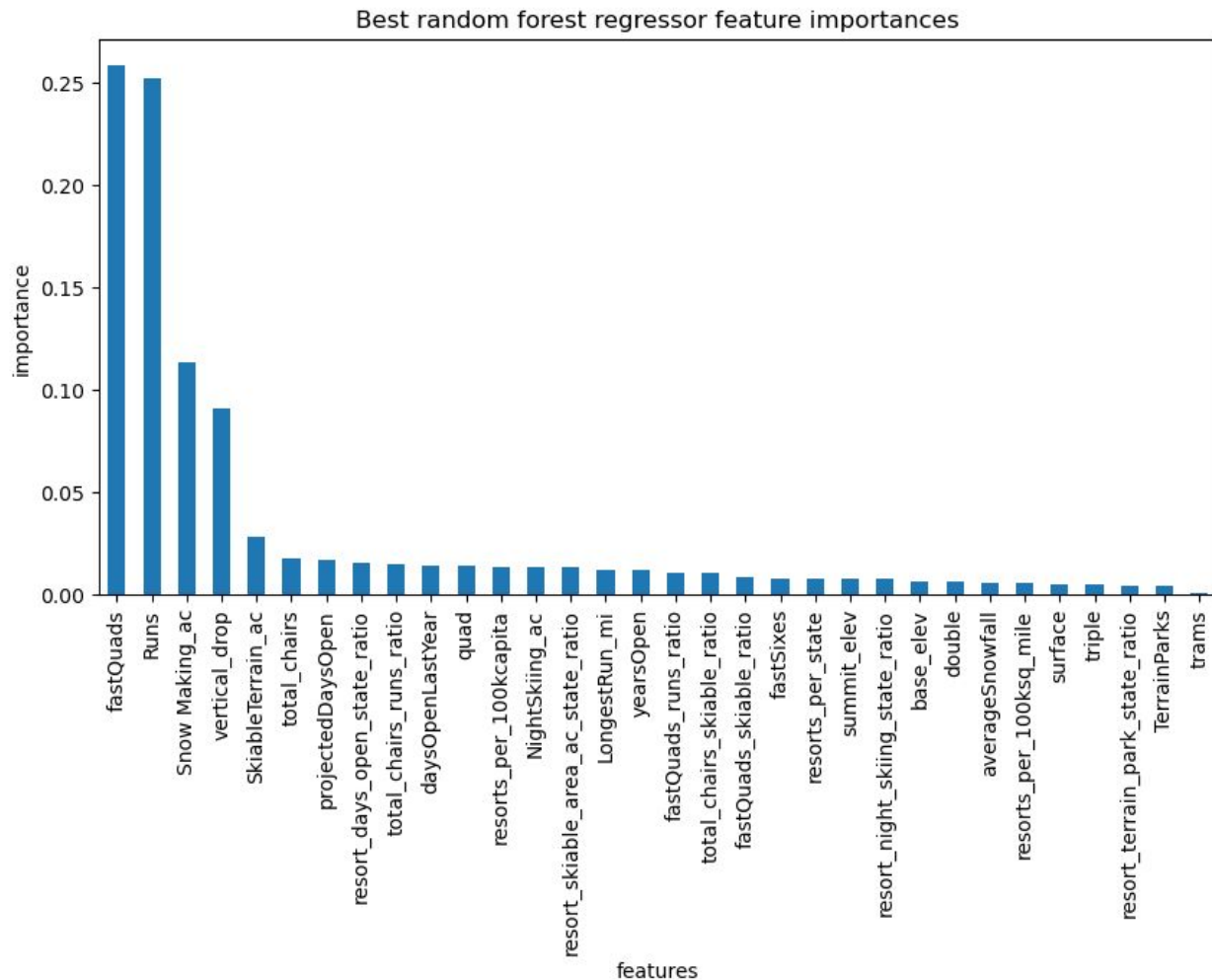
Modeling Results and Analysis

Processing and Training

- Data was split - 70% used for training, 30% as used as test split.
- The mean was investigated to determine if it is a suitable predictor and multiple simple regression models were developed inputting the median or mean for missing values and including varied subsets of the best features. These models all overfit the data.
- Simple linear regression and random forest models were developed using cross validation.
- Random forest model outperformed regression.

Modeling Results and Analysis

Top four feature importances same as linear model



Modeling Results and Analysis

Increase ticket prices:

- Market segment data suggest that that facilities at Big Mountain Resort can support a weekend lift ticket price of roughly \$96.
- Relatively large vertical drop and number of runs and very high snow making area, number of total chairs, number of fast quads, longest runs, and amount of skiable terrain. Like most other resorts, Big Mountain has no trams.
- Big Mountain is already one of the more expensive resorts in the US and in Montana.

Modeling Results and Analysis

Operational changes:

- Closing least used runs minimally supports reduction for ticket price
- Increasing vertical drop with additional snow making increases support for ticket price by \$9.90 (\$17,322,717 over the season)
- Increasing longest run to 3.5 miles with 4 acres snow making coverage does not support change in ticket prices
- Increasing vertical drop without additional snow making increases support for ticket price by \$8.61 (\$15,065,471 over the season)

Summary and Conclusion

- Further investigating increasing vertical drop without additional snow making as it results in the largest increase in lift ticket price. Cost of a new lift and its operation needs to be factored in before moving forward.
- Operation costs for all of the resorts included in dataset.
 - Predict profit
- Median state wages included in dataset.
 - Ticket price to salary ratio