# Big Mountain Resort

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Problem Identification

- Big Mountain Resort is running on high operating costs
- Current strategy: charge a premium above average price of resorts in its market segment
  - Limitations to this approach
- Goal:
  - Cut costs without undermining ticket price
  - OR improve resort to support higher ticket price

Recommendations and Key Findings

- Cutting costs is not possible without also driving down profits
  - Not recommended at this time
- See diagram (right)
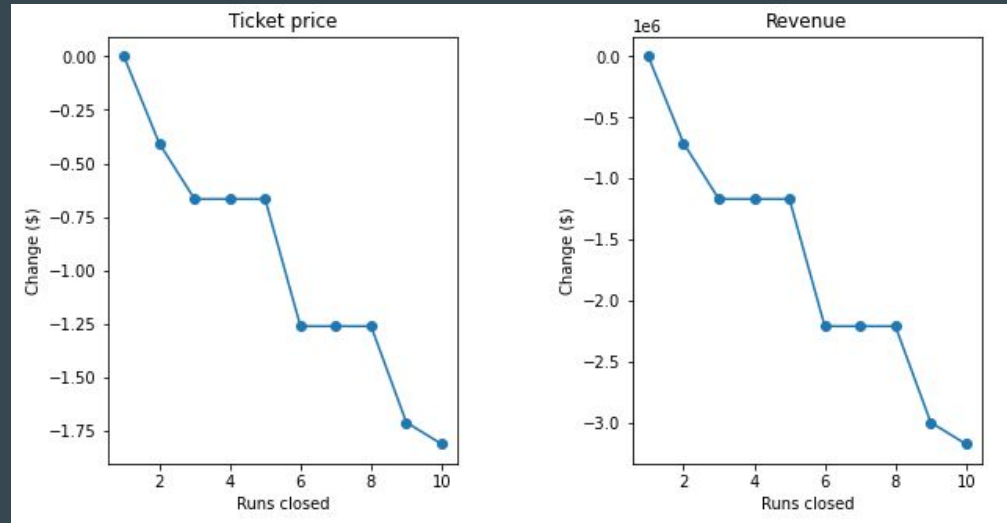
Recommendations and Findings

- Goal: Improve resort to support increase in ticket price
- Used ML model trained to predict ticket price based upon each addition to the resort
- Add one run, 150 additional feet of vertical drop, and one chair lift
  - Increase adult weekend ticket price by $1.99
  - Amounts to $3,474,638 per season
- These profits are likely sufficient in covering any additional maintenance costs associated with the improvements

Modeling and Results Analysis

- Data proved that Big Mountain Resort already does charge a premium above other Montana resorts
- However, for other resorts within market share, there is room for ticket price increase
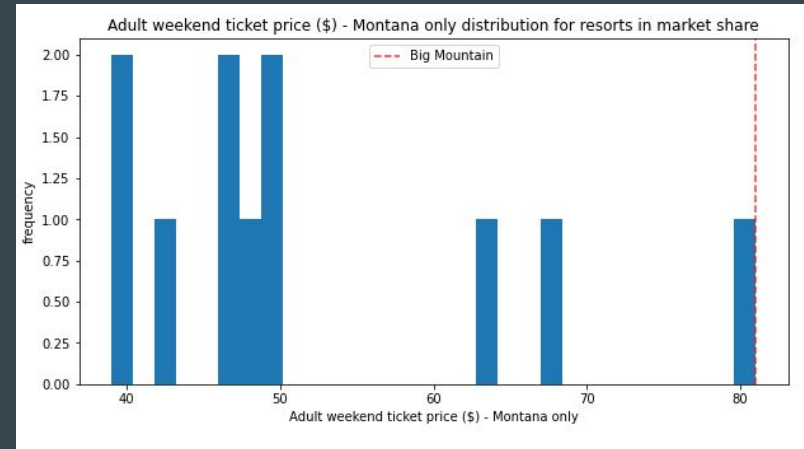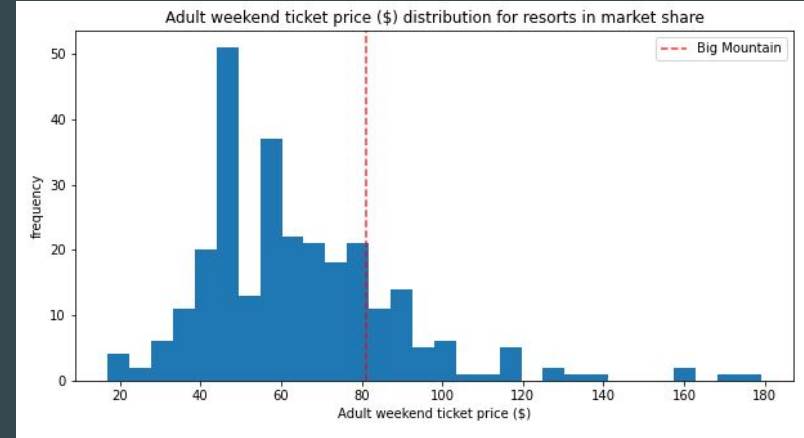
Modeling and Results Analysis

- Before running our final model that predicted ticket price increase based upon various improvements to the resort, we used a random forest regressor to identify features of importance
- These features of importance were then input into the ticket price prediction model to further determine which features will best support an increase in ticket price at Big Mountain

Best random forest regressor feature importances
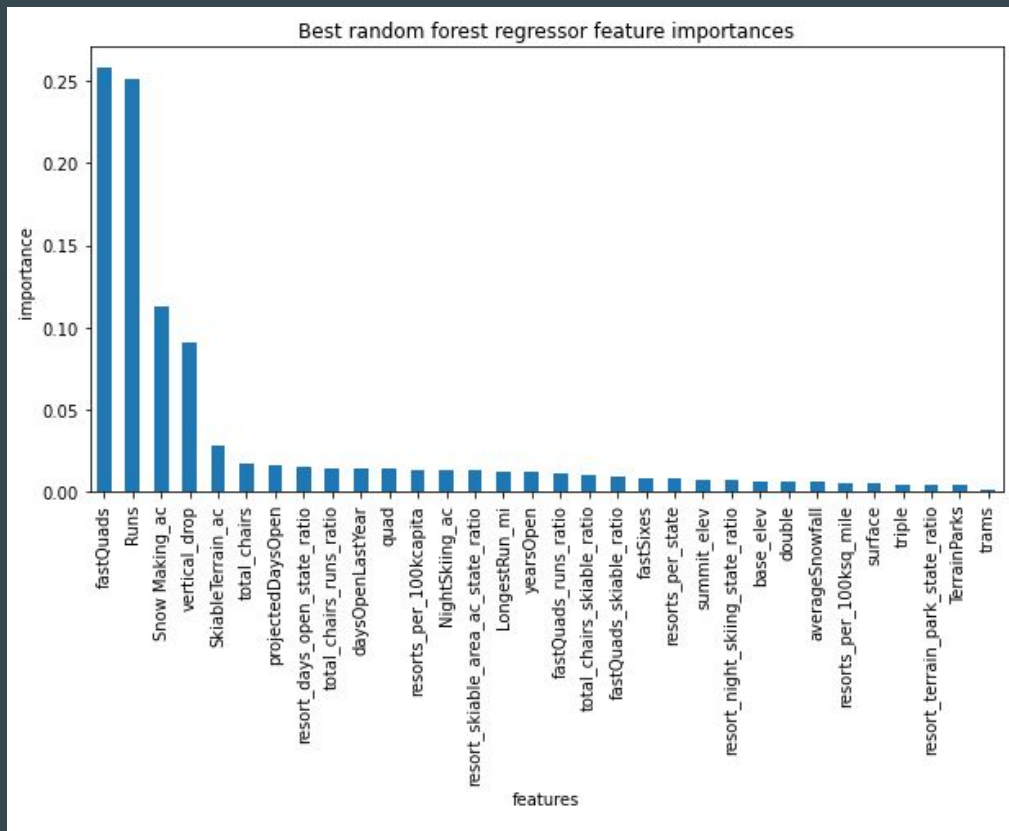
Summary

- Decreasing costs at Big Mountain Resort is not possible without driving down profits

- Improving resort to support increase in ticket price is current recommendation
  - Specifically, adding one run, 150 feet of vertical drop, and adding one additional chairlift
  - This will support a $1.99 increase in adult weekend ticket price
  - $3,474,638 additional profit per season