Data-driven pricing strategy for the Big Mountain Resort

Problem identification

- Background: A new chair lift increases the costs by $1.54M

- Objective:
  - To determine a better ticket pricing by training data-driven models
  - To provide business options and their impacts on ticket price and revenue

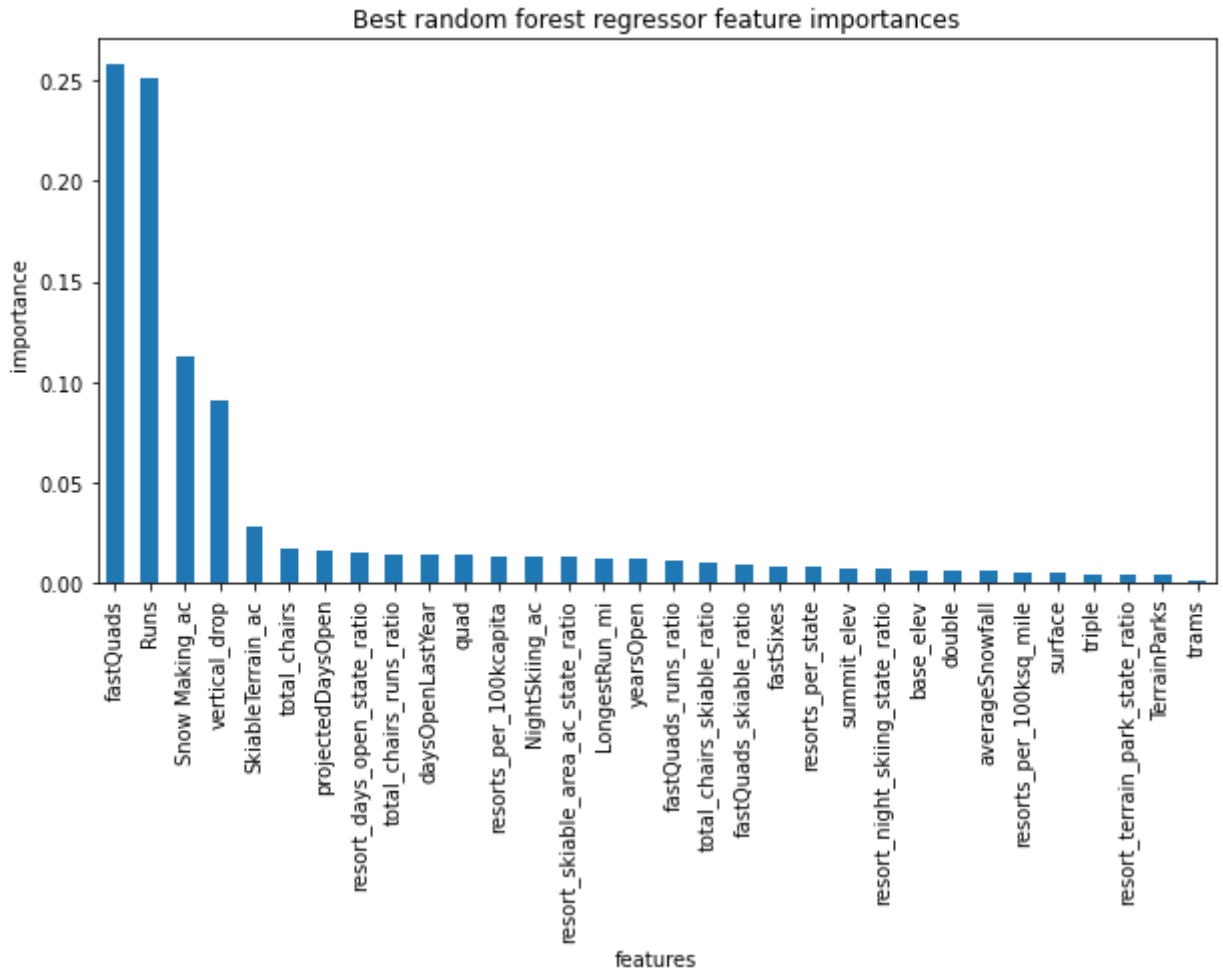
Recommendation and key findings

- Increase the ticket price to $95.87 ± 10.39

- Operation costs are important to test whether and how it impacts the current model

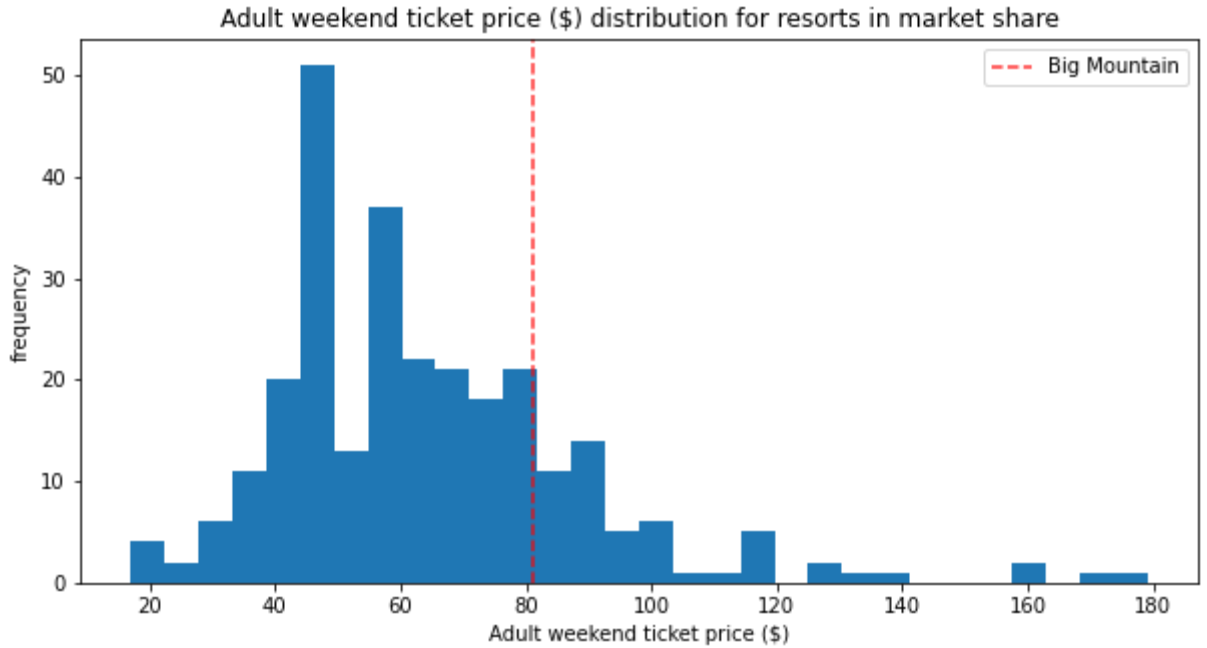
Ranking relevant features for pricing

- Dominant top four features:
  - FastQuads
  - Runs
  - Snow Making_ac
  - Vertical_drop



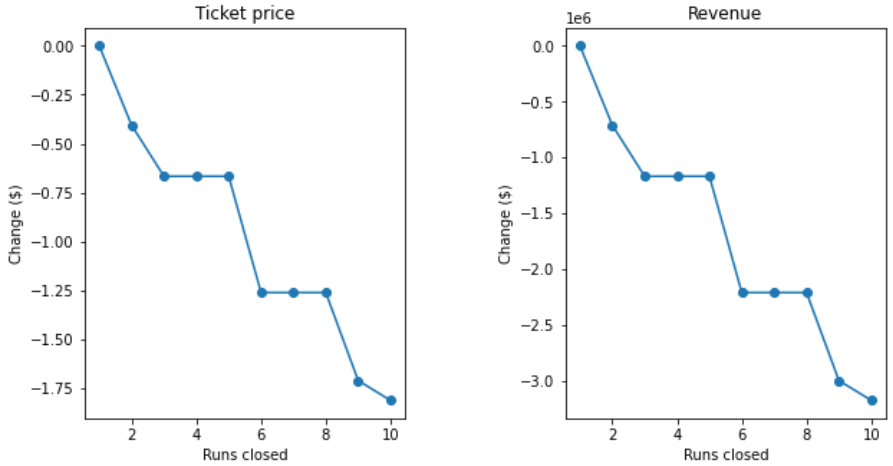
Modeling results

- The model predicts a price of $95.87 ± 10.39. A significant room for increasing the current ticket price of $81



Potential business scenarios

- Business scenario 1: Permanently closing down up to 10 of the least used runs.



Closing 1 or 5 runs is suggested to cut costs without damaging the revenue much

- Business scenario 2: By adding a run, increasing the vertical drop by 150 feet, and installing an additional chair lift, the modeled ticket price can be increased by $8.61, leading to increased revenue of $17.3M.

Summary and conclusion

- Based on the data collected from facility information of ski resorts in the United States, a random forest model is trained to predict the ticket pricing.
- The model has been cross-validated to generalize in newly collected data
- A new modeling price is $95.87 ± 10.39
- To increase revenue, closing 1 or 5 runs is suggested to cut cost or adding a run along with increasing the vertical drop by 150 feet and installing an additional chair lift to increase even higher ticket price