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GUIDED CAPSTONE

Big Mountain Resort – Summary

Problem Identification

- Key Question:
  - How can Big Mountain update their pricing strategy and increase ticket price, based on offered facilities, for the upcoming season?

- Overview:
  - Recently installed a new lift to accommodate more visitors
  - Review current pricing strategy to find most efficient model for determining ticket price, not just based on market average

Recommendation and Key Findings

- Model predicted a ticket price, based on current facilities, of $95.87 with a mean absolute error of $10.39
  - Based on the current ticket price of $81.00, there is still room to increase current ticket price

- The scenario that showed the most impact on ticket price was adding a run, increasing vertical drop by 150 feet and installing an additional chair lift
  - Increased ticket price by $1.99 and estimated season income at roughly $3,500,000

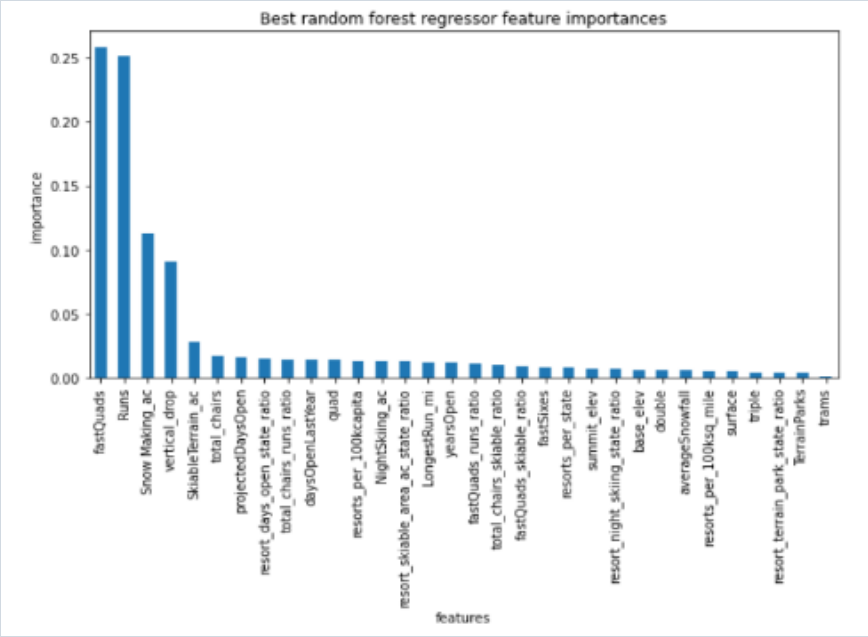
Modeling Results

- Random forest regression model proved best for predicting ticket prices based on facilities offered
  - Consistent across data sets and with linear model
  - Demonstrated less variability overall
  - Lowest cross-validation mean

- We used this model to investigate four different business solutions:
  1. Permanently closing up to 10 of the least used runs. This doesn't impact any other resort statistics.
  2. Increase the vertical drop by adding a run to a point 150 feet lower down but requiring the installation of an additional chair lift to bring skiers back up, without additional snow making coverage
  3. Same as number 2, but adding 2 acres of snow making cover
  4. Increase the longest run by 0.2 mile to boast 3.5 miles length, requiring an additional snow making coverage of 4 acres

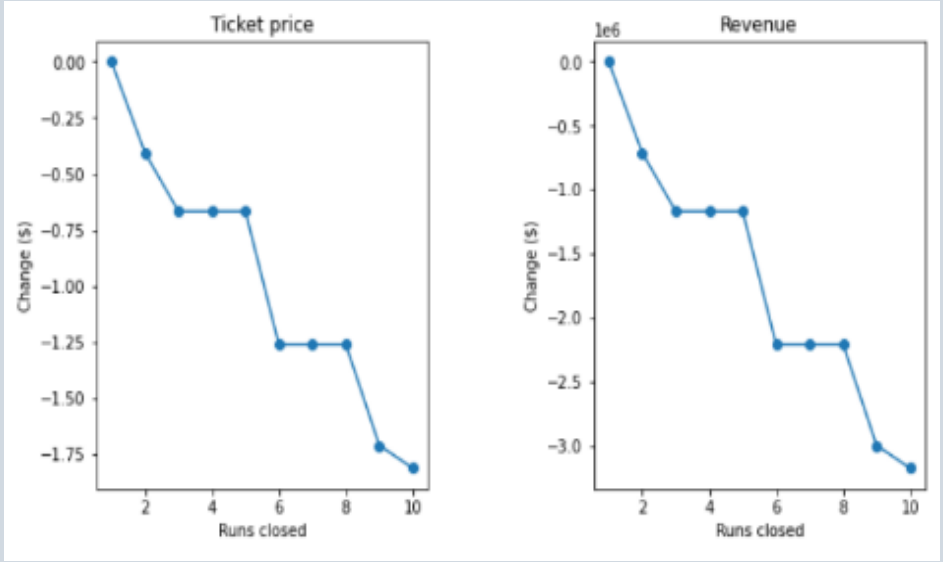
Modeling Results

- Key facilities, offered by resort, influencing ticket price:
  - fastQuads, vertical drop, snow making area, total number of runs and skiable area



Modeling Results

- Proposed scenario of closing 10 least used runs predicted large drop in revenue
  - Closing 1 run showed no difference in price



Modeling Results

- Second scenario, in which Big Mountain would add a run, increase the vertical drop by 150 feet and install an additional chair lift
  - Supported a ticket price increase of $1.99
  - Predicted season income to be around $3,500,000.
- Third scenario, added to the second and included an extra 2 acres of snow making
  - No difference in ticket price or the expected amount to be made over the season as compared to second scenario
- Fourth scenario, which called for increasing the longest run by 0.2 miles and adding 4 acres of snow making
  - No impact on ticket price
  - Could be due longest run not being a key facilities impacting ticket prices

Summary and Conclusion

- Big Mountain can increase ticket prices based on model and facilities offered by the resort
- Total number of runs is important factor in determining ticket price
  - Recommend against closing runs and consider adding additional runs instead
- Longest run does not impact ticket price as demonstrated by our model