Big Mountain Resort Business Strategy

Context & Problem

Big Mountain Resort recently installed an additional chair lift to help increase the distribution of visitors, increasing their operating costs by $1,540,000 this season. They are considering cutting costs without undermining the ticket price or supporting an even higher ticket price.

What new pricing strategy can Big Mountain Resort implement to offset their recent additional operating cost of $1,540,000 this season?

Recommendations

Two possibilities:

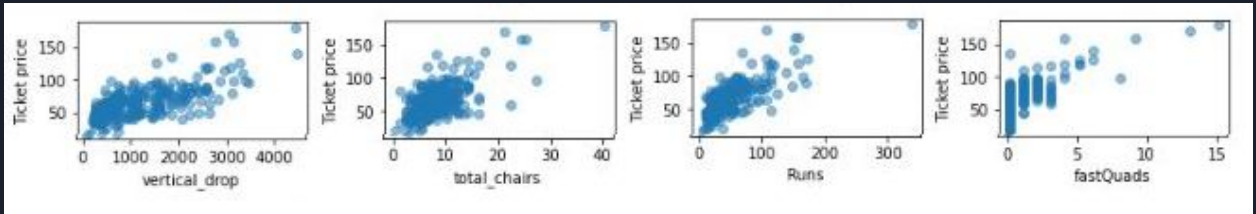
1) Close one run to lower operating costs and keep ticket prices the same.

2) Add a run, increase the vertical drop by 150 feet, install an additional chair lift and increase ticket price by $1.99.

Modeling & Analysis

After organizing given data, made some basic observations and took note of certain patterns of common features among the resorts.

Correlations between ticket prices and vertical_drop, fastQuads, Runs, and total_chairs.

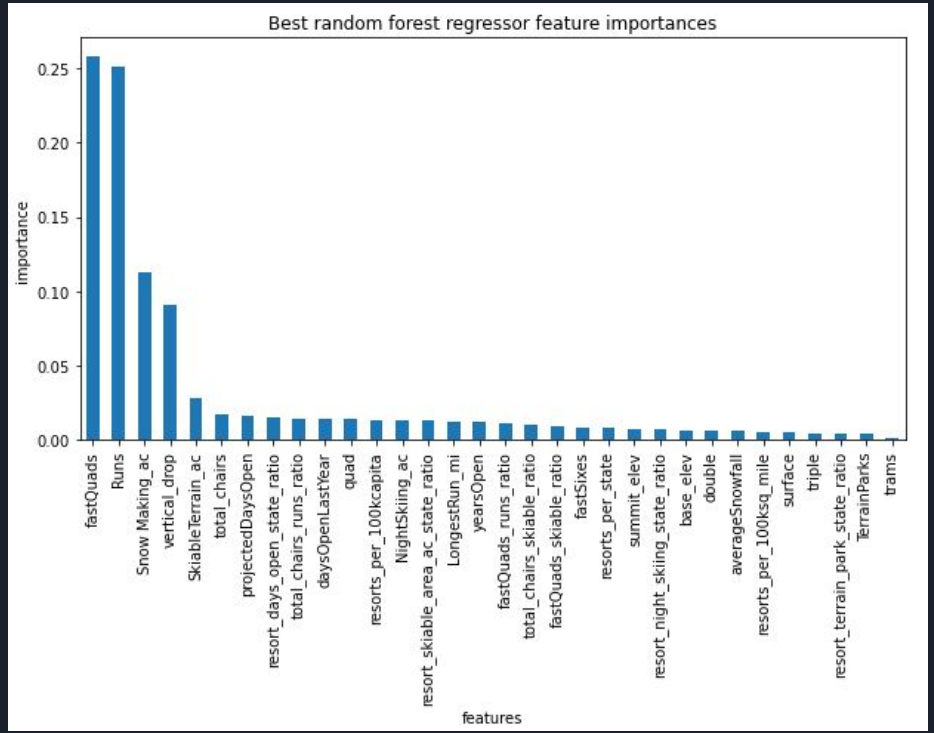


Modeling & Analysis Cont.

Gained a baseline idea of performance by simply taking the average price as a predictor.

Partitioned data into a 70/30 Train/Test split to predict how our model might perform in the future.

Built machine learning models. Random forest regressor had lowest cross-validation mean absolute error and exhibited the least variability. The model advised that the following features were important: fastQuads, Runs, Snow Making_ac, Vertical_drop.



Model & Analysis Cont.

Took model for ski resort ticket price and leveraged it to gain some insights into what price Big Mountain's facilities might actually support as well as explore the sensitivity of changes to various resort parameters.

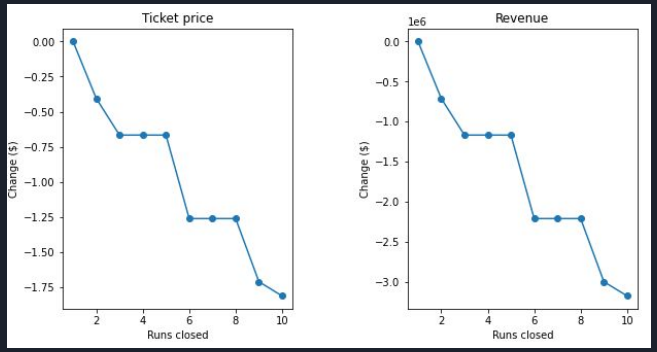
Tested Four Scenarios:

1) Close up to 10 of the least used runs. The number of runs is the only parameter varying.
2) Add a run, increase the vertical drop by 150 feet, and instal an additional chair lift.
3) Same as scenario 2 but adding 2 acres of snow making.
4) Increase the longest run by .2 miles and guarantee its snow coverage by adding 4 acres of snow making capability.

Modeling & Analysis Cont.

Only two scenarios are worth considering.

1) Closing one run makes no difference. Closing 2 and 3 successively reduces support for ticket price and so revenue. Closing 3 to 5 makes no further loss in ticket price. Closing more than 6 leads to a large drop.



2) Adding a run, increasing the vertical drop by 150 feet, installing an additional chair lift and increasing ticket price by $1.99. Over the season, this could be expected to amount to $3474638

Conclusion

Big Mountain Resort currently charges $81 for an adult ticket.

By adding a run, increasing the vertical drop by 150 feet, and installing an additional chair lift, the data supports raising the ticket price by $1.99 to $82.99.

Assuming each of the 350,000 visitor on average buying 5 day tickets, over the season, this increase in price could be expected to amount to $3,474,638.

The profits seem to outweigh the cost.