Pricing Strategy of Big Mountain Resort

Guided Capstone Project

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Problem Statement

Big Mountain resort, Montana

Facilities: spectacular views, t-bars, lifts, runs etc.

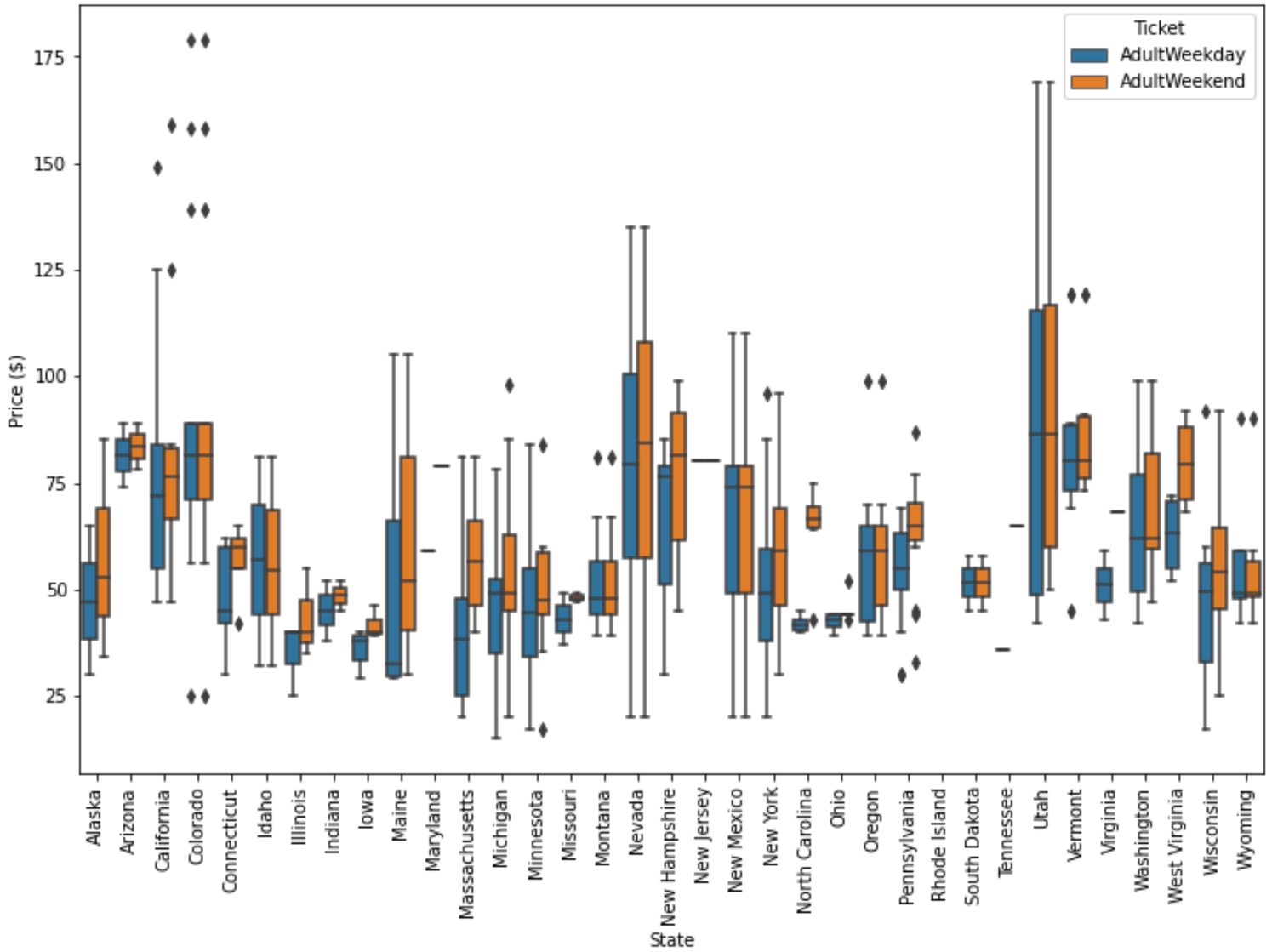
Problem

There is a suspicion that the resort is not capitalizing on its facility as much as it could do

Seek For Solution

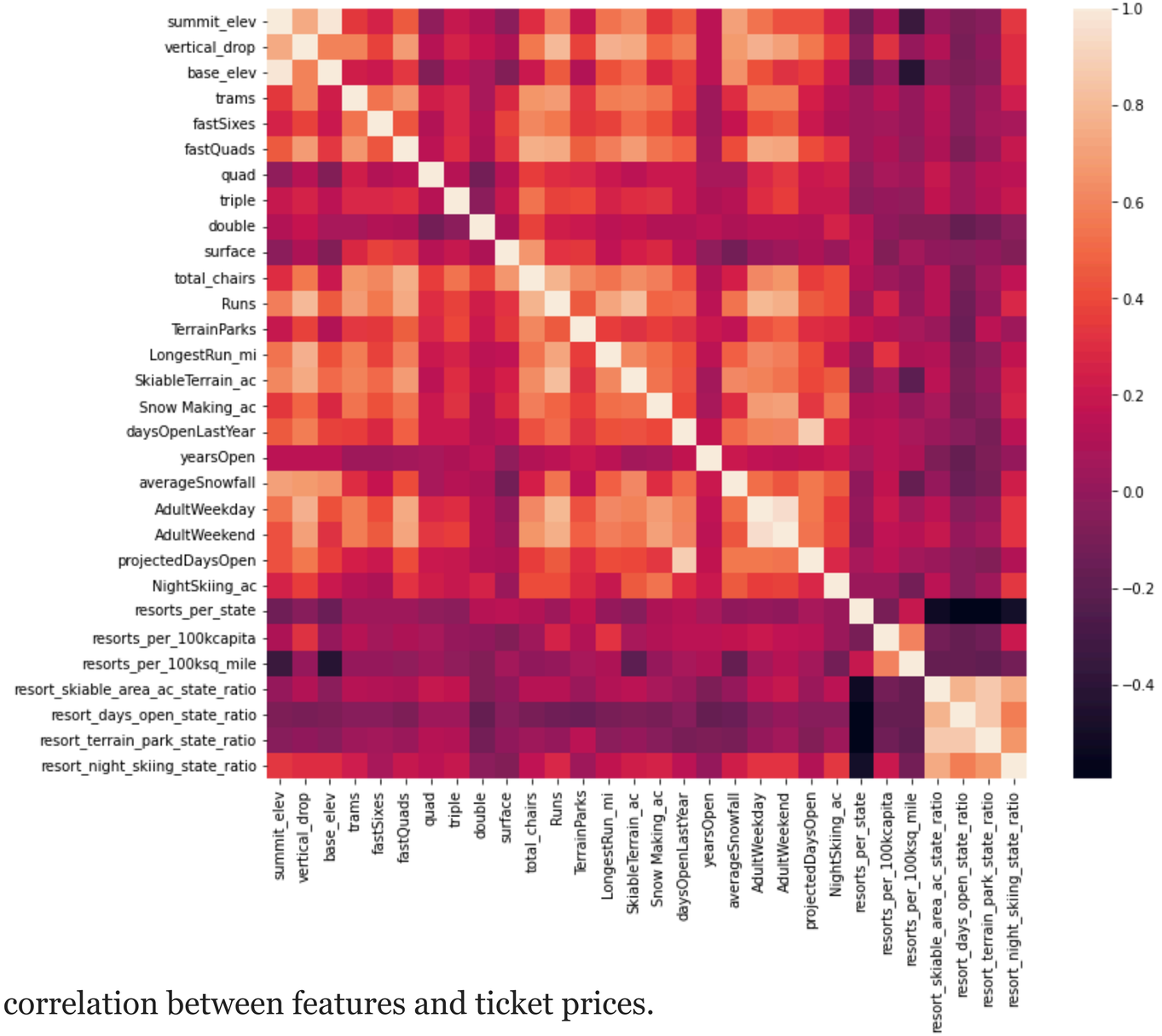
Solution on how to select a better value for their ticket price

Ticket Prices Across the States



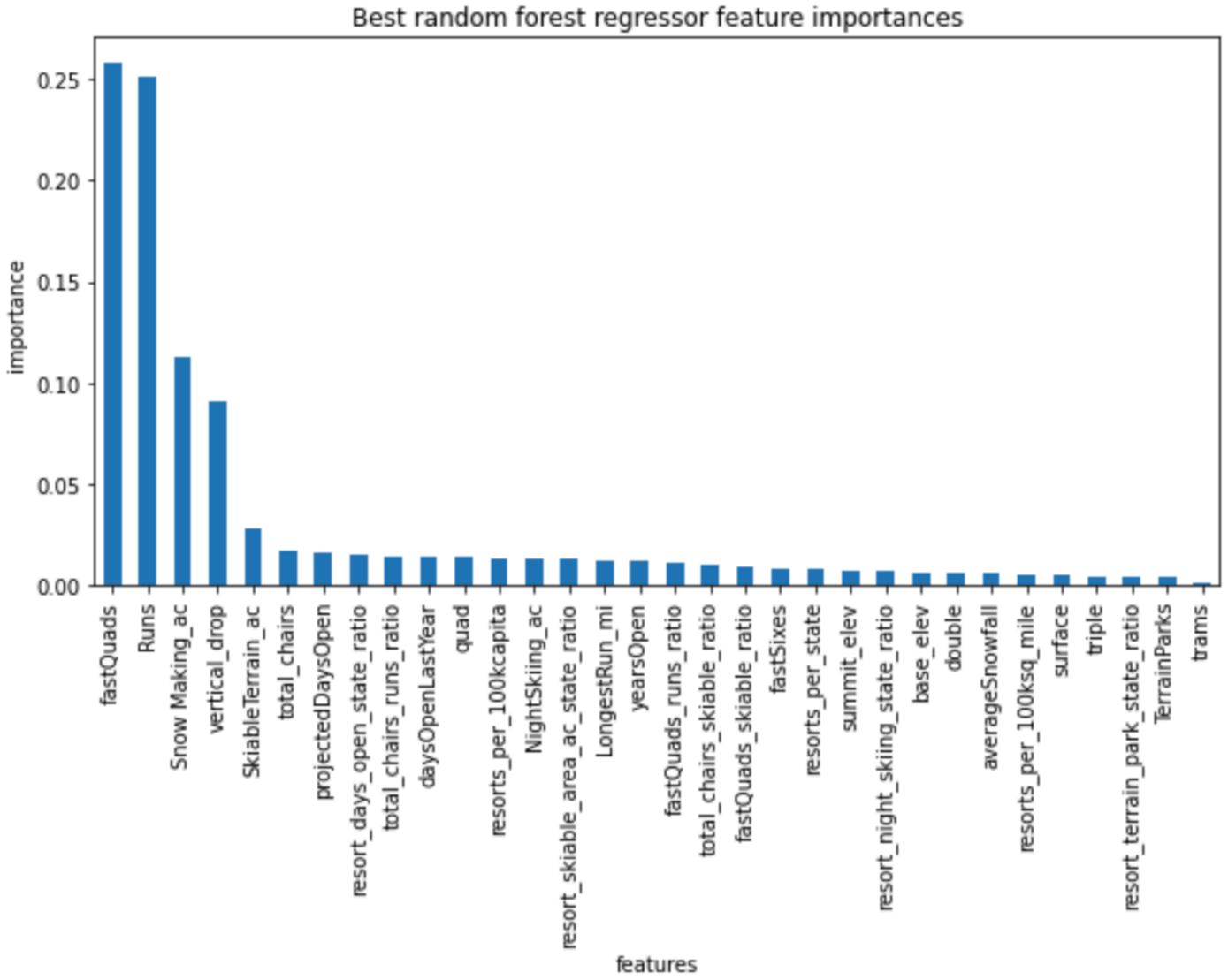
- What do you do about the two types of ticket price?
- What do you do about the state information?

Feature correlation heatmap



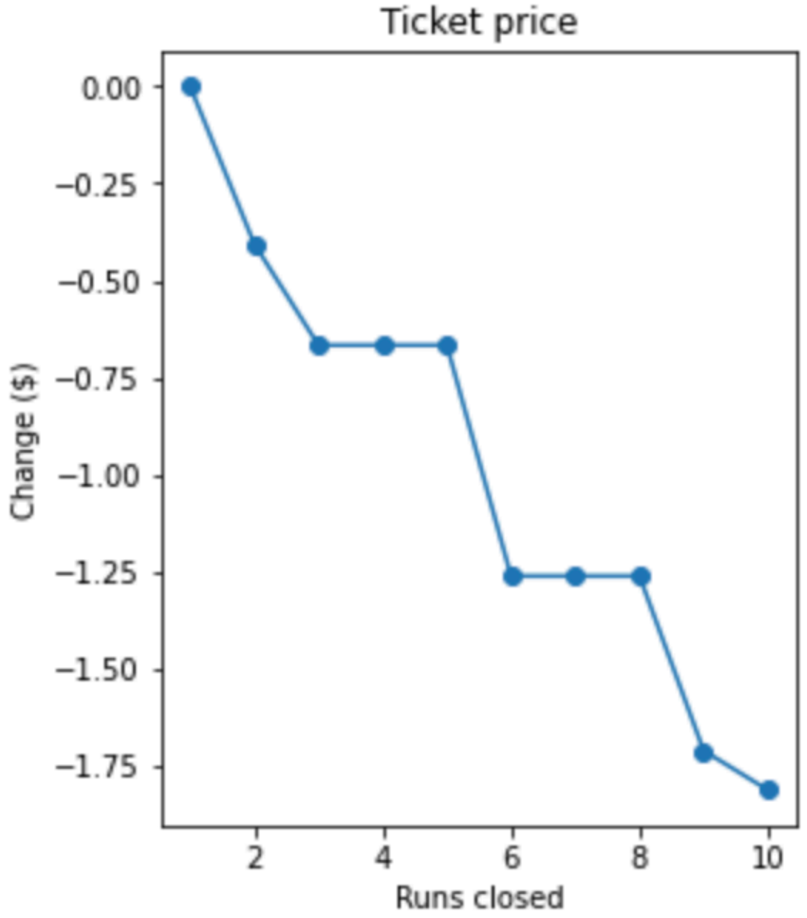
- There are quite reasonable correlation between features and ticket prices.

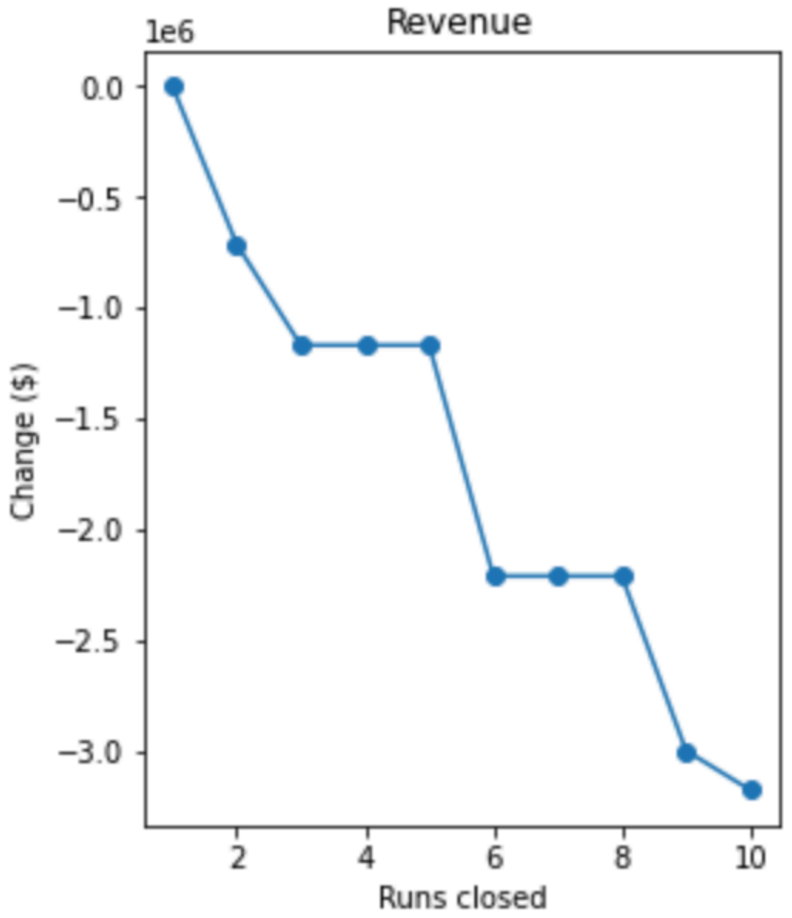
ML Models



- The random forest (RF) model has a lower cross-validation mean absolute error by almost $1 compared to linear regression model. It also exhibits less variability. So, we chose RF model for further consideration.

Modeling Scenarios





The model says closing one run makes no difference. Closing 2 and 3 successively reduces support for ticket price and so revenue. If Big Mountain closes down 3 runs, it seems they may as well close down 4 or 5 as there's no further loss in ticket price. Increasing the closures down to 6 or more leads to a large drop.

Conclusions

- According to our prediction, there is a room for increase in Big Mountain Resort’s ticket price.
- If Big Mountain adds a run, increases the vertical drop by 150 feet, and installs an additional chair lift, it increases support for ticket price by $1.99.
- If it adds 2 acres of snow making, it increases support for ticket price by $1.99.
- If it increases the longest run by 0.2 miles and guarantees the snow coverage by adding 4 acres of snow making capability, that does not make any difference in pricing.