



Big Mountain Resort

MACKENZIE UNGER

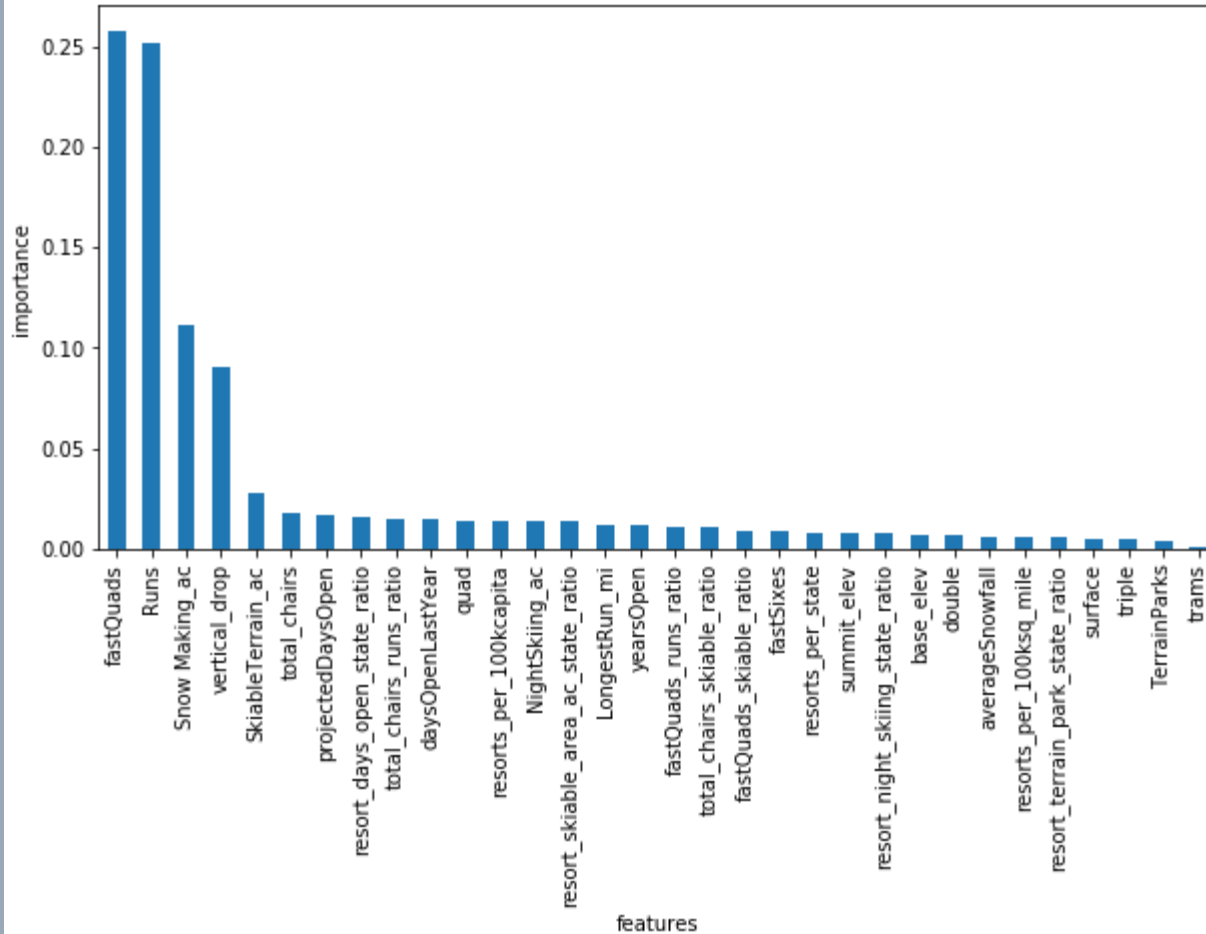
Problem Identification:

- Big Mountain Resort installed an additional chair lift, which has increased operating costs by \$1,540,000 this season.
- Big Mountain Resort has been underpricing their tickets.

Recommendations:

- Increase ticket prices to around \$90.
- Increase the vertical drop feature of the resort by opening an additional run lower down the mountain.
- Close a less popular run to help reduce operating costs.

Best random forest regressor feature importances



Increase Ticket Price:

Random Forest Model:

- modelled price is \$94.22
- actual price is \$81.00

Even with the expected mean absolute error of \$10.39, this suggests there is room for an increase.

Random Forest Important Features:

- Fast Quads
- Runs
- Snow Making
- Vertical Drop

Increasing Vertical Drop:

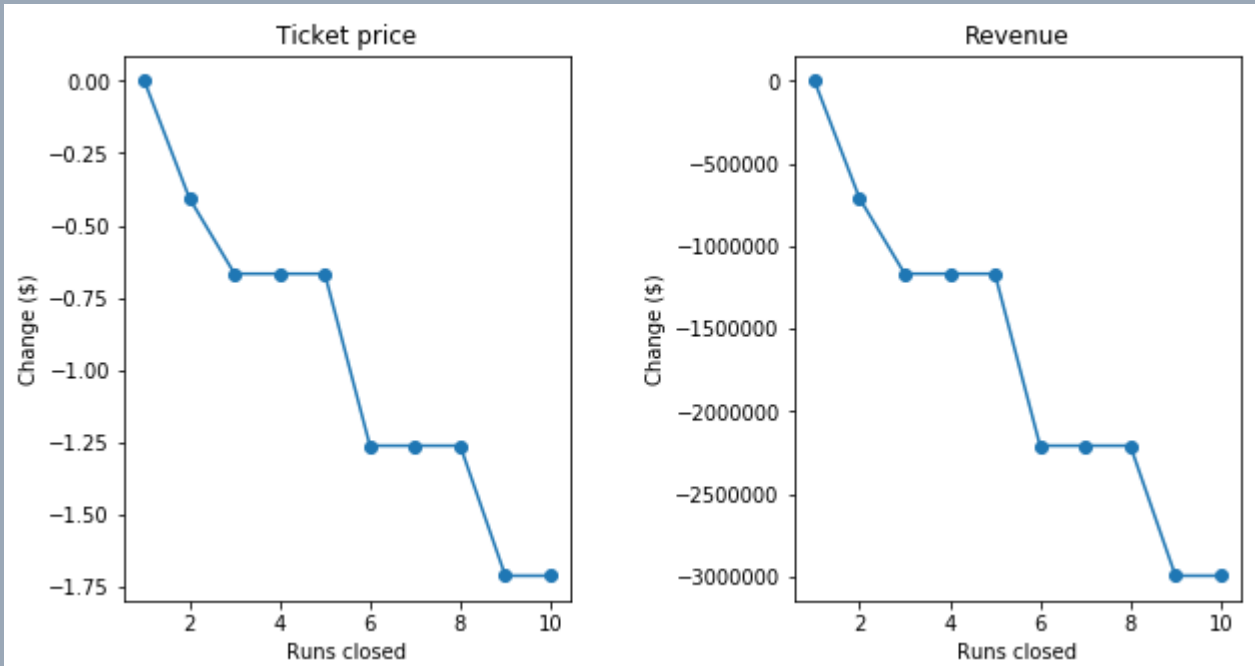
- As seen in previous graph, vertical drop is an important feature.*
- Scenario Suggestion:*

Increase the vertical drop by adding a run to a point 150 feet lower down, install an additional chair lift to bring skiers back up, and add 2 acres of snow making cover.

*This scenario increases support for ticket price by \$9.75
Over the season, this could be expected to amount to \$17,068,841*

Closing a run:

- The closing of 1 run does not effect our price or revenue
- Closing 2 or 3 runs will cause a sharp decrease
- Closing 4 or 5 runs is no different than closing 3 runs



Note:

In the previous suggestion we opened a run, so if we do open another run, we could possibly close a 2nd run without causing the price to drop.

Conclusion:

- *The Random Forest Model supports the increase of our ticket price to \$94 with all of our features as is.*
- *Increasing our vertical drop helps support our increased ticket price, though this does need the installation of another chair lift, supports a \$9 increase in ticket price.*
- *Closing runs helps decrease operational costs, however closing too many decreases our ticket price.*

Any combination of these will help to increase our revenue for this coming season. I would suggest increasing ticket prices to \$90 and working with Marketing to highlight our excellence in the important features. We can close one run without effecting our ticket price, and that will help to cut operational costs.