Big Mountain Resort

Price Strategy

// Slidesgo Snow

Table of contents

Problem Identifications

01

You can enter a subtitle here if you need it

Problem Statement Worksheet (Hypothesis Formation)

Provide the optimal pricing strategy which is based on data of 330 resorts in the US and suggest operating changes to increase revenue by ~10% and decrease operating cost by 1-3%.

1 Context

Big Mountain is a ski resort in Montana. Every year about 350 000 people ski or snowboard at Big Mountain.
Big Mountain Resort has recently installed an additional chair lift, which increases operating costs by $ 1 540 000 this season, to help increase the distribution of visitors across mountain.
The resort's pricing strategy has been to charge premium above the average price of resorts in its market segments. There is a suspicion that Big Mountain is not capitalizing on its facilities as much as it could.

2 Criteria for success

The business increases the revenue by 10% and decreases the operating costs by 2%.

3 Scope of solution space

Consider resorts in the same regions (Subset DataFrame). Find if there are strong correlations between the prices and the base elevations, summits, and vertical drops. If there are strong correlations then project your price based on these correlations. Find out if there strong dependence between fast lifts and prices. Depending on that you can increase the speed of the lifts

4 Constraints within solution space

If you increase your price too much you can lose loyal customers. If you will be too modest, you will lose possible revenue.

5 Stakeholders to provide key insight

Jimmy Blackburn – the Director of Operations
Alesha Eisen – the Database Manager

6 Key data sources

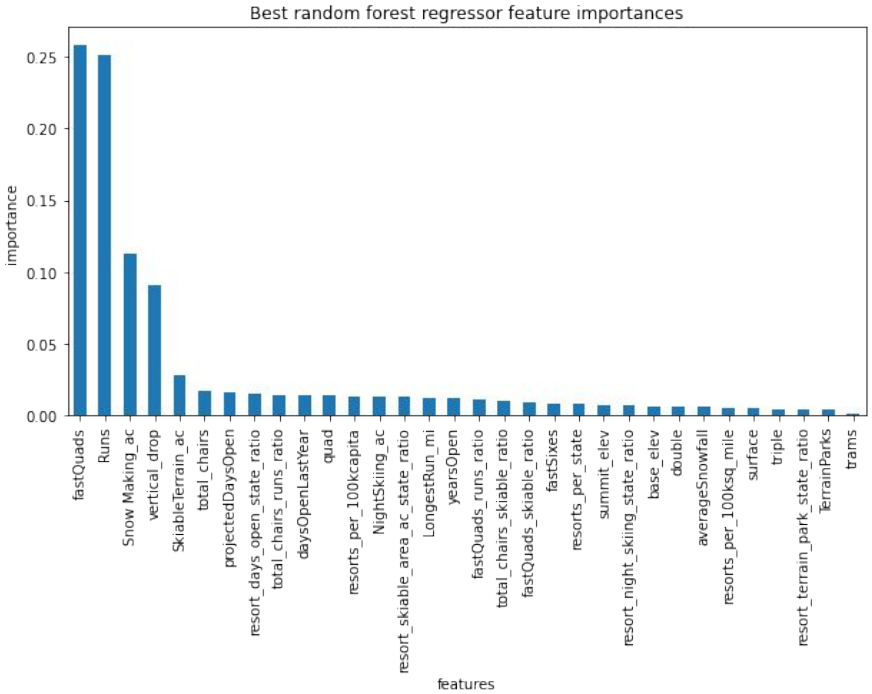
A SQL database of 330 resorts in the US

02

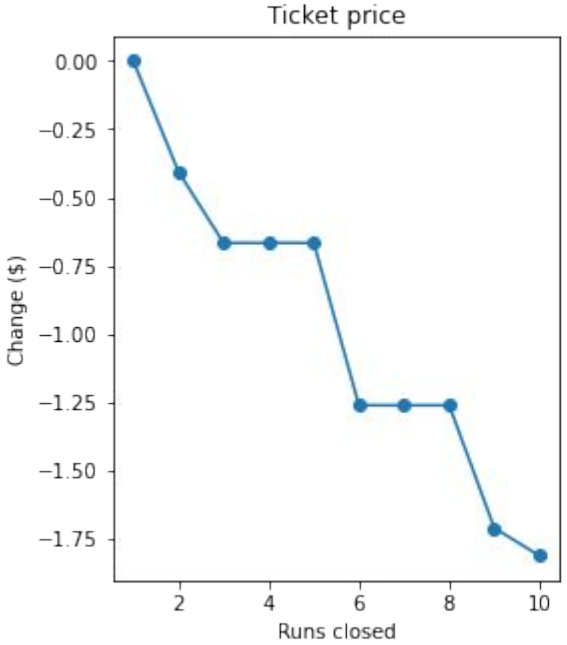
Recommendations and Key Findings

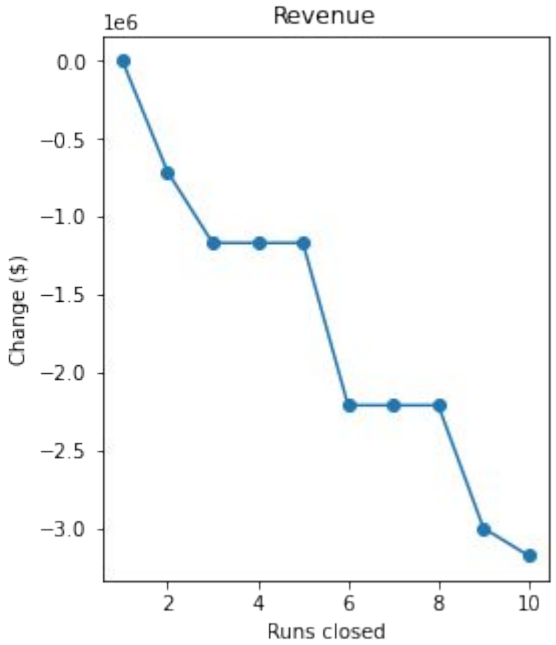
Focus on

1) The number of four persons chairs;
2) Count of the number of runs on the resorts;
3) Total area covered by snow making machines in acres;
4) Vertical change in elevation from the summit to the base in feet;
5) Sum of all chairlifts at the resorts.



Close one Run





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.

03

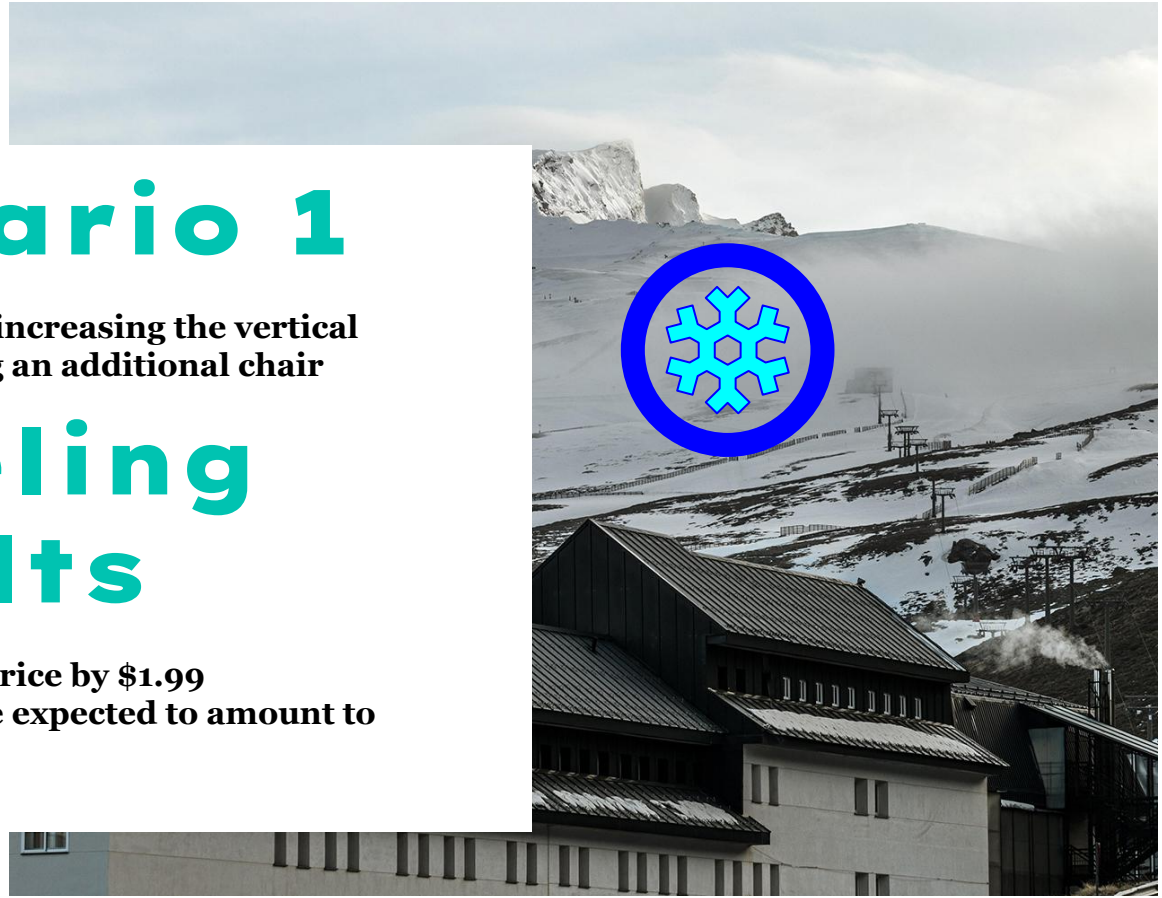
Modeling Results and Analysis

Scenario 1

Big Mountain is adding a run, increasing the vertical drop by 150 feet, and installing an additional chair lift.

Modeling Results

Increases support for ticket price by $1.99
Over the season, this could be expected to amount to $3474638



Scenario 2

Repeating the previous one but adding 2 acres of snow making.

Modeling Results

Increases support for ticket price by $1.99
Over the season, this could be expected to amount to $3474638

Scenario 3

Increasing the longest run by .2 miles and guaranteeing its snow coverage by adding 4 acres of snow making capability.

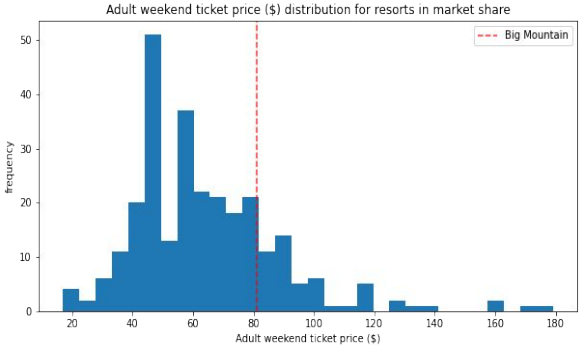
Modeling Results

No difference whatsoever. Although the longest run feature was used in the linear model, the random forest model (the one we chose because of its better performance) only has longest run way down in the feature importance list.

Summary and Conclusion

04

- The State labels don’t affect Price Much
- Big Mountain Resort modelled price is $95.87, actual price is $81.00. Even with expected mean absolute error of $10.39, this suggests there is room for increase.



Thank you for Attention

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