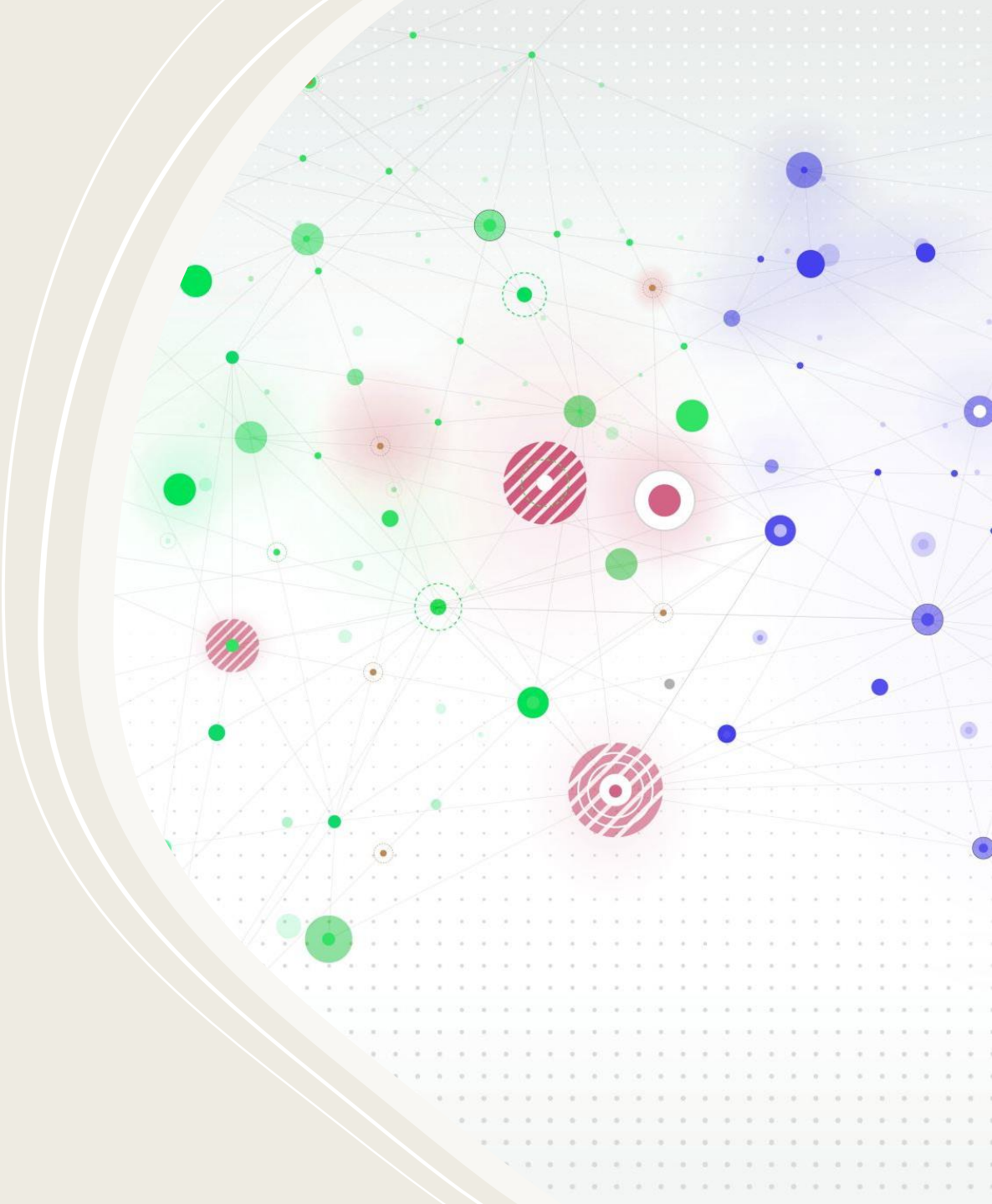
A Presentation on Big Mountain Resort Pricing Strategy



Shahjahan Ahmed

Problem Statement

Big Mountain Resort is planning to adopt the premium pricing strategy to get profit and business value for the current facilities and, also for recent investment of $1540000.0 by using proper analysis of the provided data.

Context:

Big Mountain Resort, a ski resort in Montana offers ski/snowboard for people of all levels and abilities. They resort have some unique attractions and facilities and, recently, they've installed an additional facility to help increase the distribution of visitors across the mountain and which costs of $1,540,000. In order to get profit and business value, and brand loyalty the management team has decided to change the resort's pricing strategy.

Criteria for Success:

The company need to offer a pricing strategy that will be suitable for profitability, brand value, and market advantage. Also, the pricing strategy need to be reasonable by comparing the facilities provided by other resorts in order to accept positive response from visitors.

Scope of Solution Space:

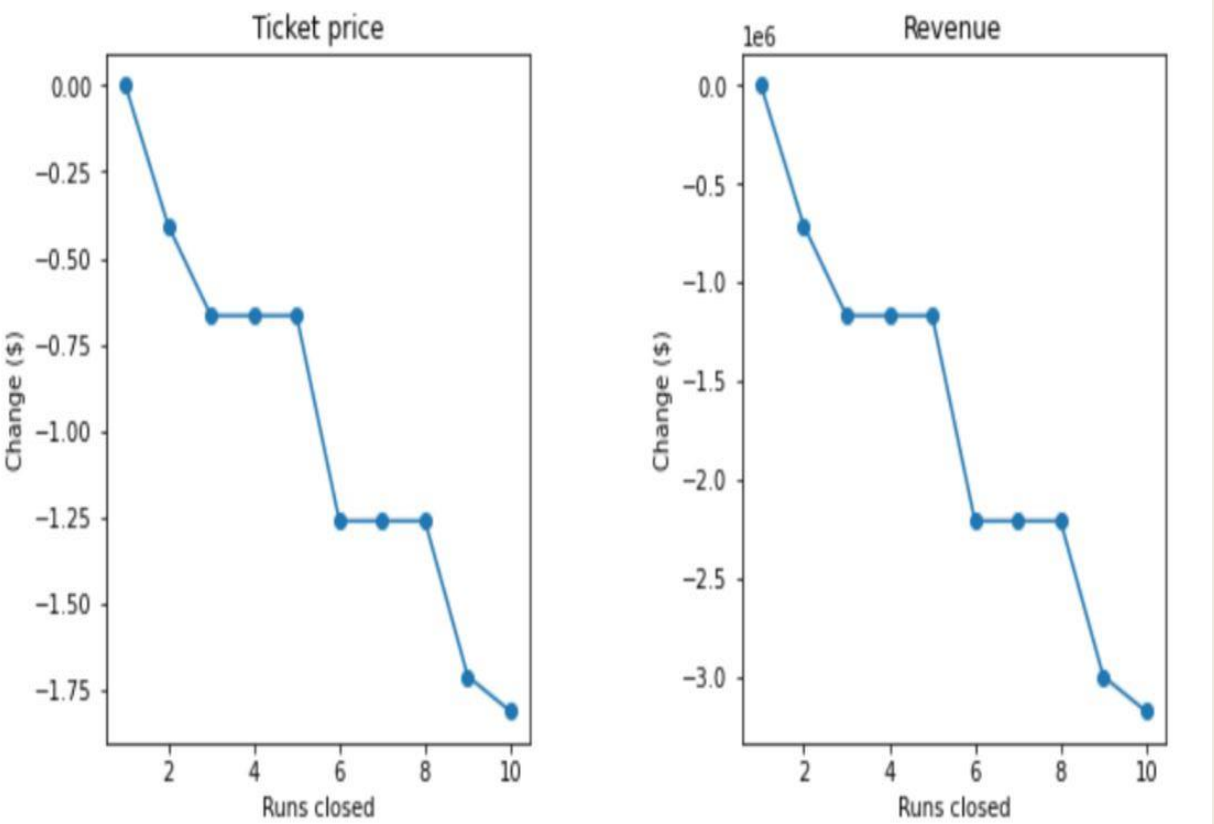
By comparing the attractions, facilities, and pricing strategies of other resorts the company need to choose its pricing strategy. It is possible to adopt premium pricing because the resort have proper facilities and attraction compared with others resorts.

Constrain Within Solution Space:

- Some column has Null values
- Facilities and price are not consistent for all resorts
- Geographic location can vary the price also

Recommendation and key findings

- Our proposed model offers the predicted price of Big Mountain Resort is $95.87, which is more than the current actual price of $81.00. Also, the expected mean absolute error of $10.39 suggests that there is a possibility to offer more ticket price than the predicted one.
- The validity of the model lies in the assumption that other resorts accurately set their prices according to what the market supports. By comparing the features w ith other resorts, it seems Big Mountain Resort is currently undercharging despi te having comparatively great features.
- When analyzing relative features with other resorts, I have found Big Mountain Resort have some important features and they are vertical_drop, Snow Making_ ac, total_chairs, fastQuads, Runs, LongestRun_mi, trams, SkiableTerrain_ac res pectively



Modeling Result and Analysis

Modeling scenarios:

By analyzing the relative features, the business has shortlisted some options:

Scenario 1

Permanently closing down up to 10 of the least used runs. This doesn't impact any other resort statistics.

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.

Scenario 2

In this scenario, Big Mountain is adding a run, increasing the vertical drop by 150 feet, and installing an additional chair lift. This scenario increases support for ticket price by $1.99 over the season, this could be expected to amount to $3474638

Scenario 3

In this scenario, we are repeating the previous one but adding 2 acres of snow making. This scenario increases support for ticket price by $1.99 over the season, this could be expected to amount to $3474638 Such a small increase in the snow making area makes no difference!

Scenario 4

This scenario calls for increasing the longest run by .2 miles and guaranteeing its snow coverage by adding 4 acres of snow making capability. 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 runway down in the feature importance list.

Summary and Conclusion

Despite having some missing and incorrect values in the dataset, we have successfully predicted the ticket price for Big Mountain Resort by analyzing and modeling all the relative features. The new price will gain the profitability and business value for the resort.