Guided Capstone Project: Blue Mountain Resort

Krystal Osei

Blue Mountain Resort & Mission

- Blue Mountain Resort, located in Montana, NY.

- The resort offers spectacular views of Glacier National Park and National Forest giving their customers access to 105 trails.

- Every year, the ski resort receives about 350,000 customers, and one great feature of this resort is their mission to accommodate people of all levels and abilities.

- Along with these beautiful features and aspects of Blue Mountain, the resort added an additional chair lift that cost $1,540,000.00. They are looking to increase their ticket price so they can cover operational costs and maximize their revenue..

Executive Summary

01 Clean the data: First , we will look through our data and see what information our columns and rows will give us. We will take note of how other resorts are doing and what price they charge their customers.

02 Exploratory Analysis: We explore our data and take note of what influences the other states to charge their customers.

03 Model: We built a model, (function) by using the train/test split technique. We will train the model on 70% resorts in the ski resort and test it on the other 30% of the resorts . This model can help Blue Mountain in the future purchases.

04 Modeling Checkpoint: This step we will refit the model to the Blue Mountain Resort and see at what features or facilities does Blue Mountain have that makes them stand out. This is something that will influence how theh increase their prices.

01 - CLEANING DATA AND ORGANIZING DATA

- When loading the data as shown in figure 1 and figure 2 we noticed that there were two types of tickets offered at resorts in US; *Adult Weekend* and *Adult Weekday*.

- We decided to predict the Adult Weekend price because there are many data points for Adult Weekend, and with more data we will be able to make a better prediction.

- The resorts also have different features that as we examine further in next slides. These features may affect the price at each resort. The Blue Mountain resort goal is to maximize on their features so they can maximize their profit.

- The feature we will focus on are; Terrainarks, Skiable Terrain_ac, and nightskiing_ac. We removed the fast_eight feature because it did not have many data points.

02 - EXPLORE BLUE MOUNTAIN DATA

- In this step we will explore our data further and take note of any correlation between state summary statistics and the state population or features.

- The state summary statistics which are the *Total state area, total state population, resorts per state, Total skiable area, Total night skiing data, and Total days open*.

- Montana was the third largest in skiable area but Montana state population was not high compared to the other states.

- We took a further look at the skiable area to total state skiable area , ratio of resort days open to total state days open, ratio of resort terrain park count to total state terrain park count, and the ratio of resort night skiing area to total state night skiing area

03- MODELING OUR DATA TO PREDICT RIGHT PRICE

- We then built a model using a 70/30 train split technique. When we applied this technique we tested our function on 70% of the data and then we tested it on the rest, 30%, of the data.

- We then used the function on our Big Mountain column and we found out Blue Mountain was undercharging their customers. They should be charging their customers $19.00 more dollars for their adult price tickets.

- Originally, Blue Mountain was charging their customers $81.00, but when our function takes into account the features that make Blue Mountain stand out the Adult Weekend price should be $104.00.

For the model checkpoint w examined how the Blue Mountain is doing compared to the other resorts in by looking at these eight features *vertical_drop, Snow Making_ac, total_chairs, fastQuads, Runs, LongestRun_mi, trams, and SkiableTerrain_ac.*

These are the six highlights received when we compared how Blue Mountain was doing within these features compared to other resorts.

1. The Big Mountain resort is top in making snow making areas.

2. Big Mountain contains a high number in total of chairs.

3. Big Mountain also has three fast quads which is more than most of the other resorts.

4. The vast majority of resorts, such as Big Mountain, have no trams.

5. Big Mountain has one of the longest runs.

6. Big Mountain is amongst the resorts with the largest amount of skiable terrain.

We tried to see if we take into account the features that make Blue Mountain resort stand out then we will be able to increase the ticket price, but it only increased it by $1.36. It's best to just increase the ticket price based on how other resorts are charging.

CONCLUSION

- The Blue Mountain Resort needs to take into account that they are in a free market.
- Blue Mountain has a big ski area and it also has the
- With the features and with the amount of customers the that attend Blue Mountain Resort should look into increase their prices when they add an chair or a feature in their resort.
- As the model suggest increasing the price by 19 dollars and charging. their customers $104.80.
- Adding other great features to the Blue Mountain that will continue to justify why Blue Mountain should charge their customers a higher price.