



Big Mountain Report

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What can Big Mountain Resort do to capitalize on some of its facilities that are more important than others facilities, so that they can cut costs without undermining the ticket price or can support an even higher ticket price by the next season?

Recommendation and Key Findings

- ❖ We recommend increasing the ticket price between **\$82.00** to **\$89.45**.
- ❖ We found there are eight features that are more valuable than others. We compared Big Mountain to other resorts in the US and noticed Big Mountain is above average in most of features provided.

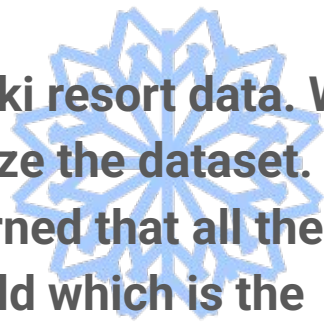
Conducted Multiple Scenarios to Understand How Pricing Changes.

1. Closed down **10 runs** permanently and found if we close **4-6 runs** the pricing drops while closing more than **6 runs** the pricing has no change.
2. Added a **1 run**, increased the vertical drop by **150 feet**, and installed **1 chair lift**. The result increases support for ticket price by **\$0.44**.
3. We are repeating the previous one but adding **2 acres** of snow making and the result is similar to the last one with support of **\$0.44** increase.
4. Increase the longest run by **0.2 mile**, requiring an additional snow making coverage of **4 acres** the result no difference.

Result Analysis

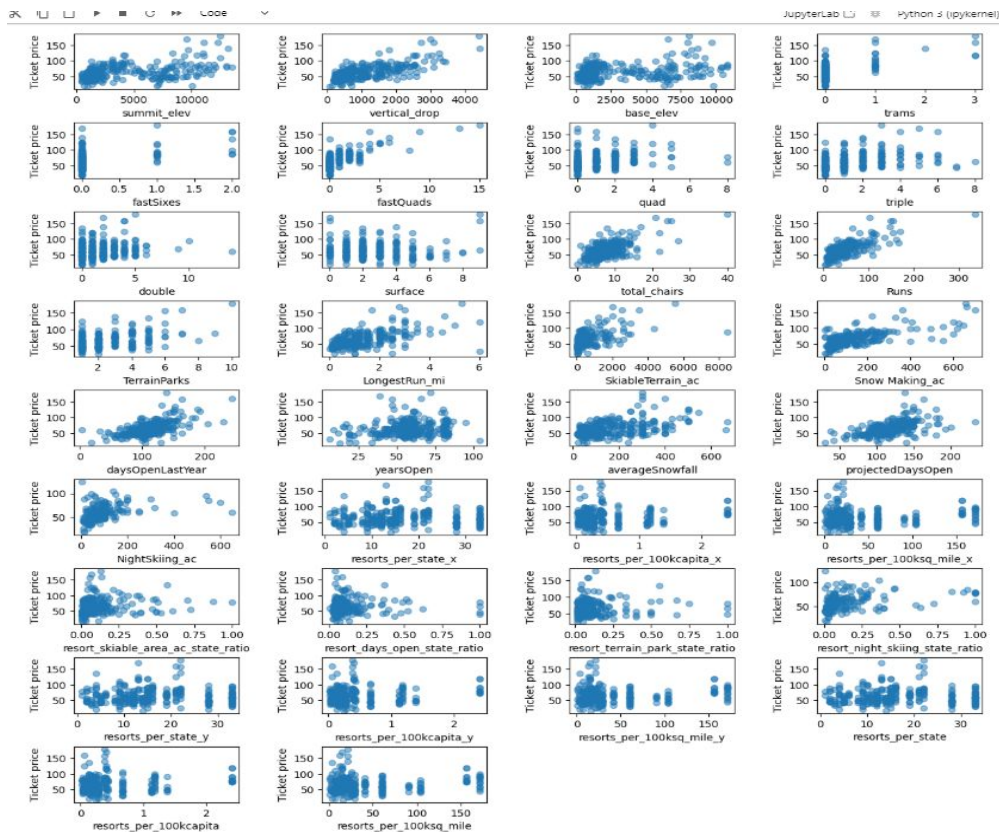


We landed on these conclusion because we analysed the US ski resort data. We used Data Science Method data wrangling to clean and organize the dataset. It is good to delete rows and column that will not help us. Also learned that all the rows have unique entries. Our focus was on AdultWeekend field which is the pricing on the weekend. We checked all the information was correct and there was a pricing for each resort. Data wrangling helps us understand general information about the data but it is important to dive deep into relationships.



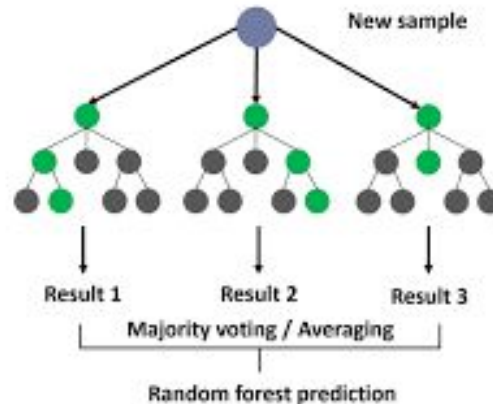
Result Analysis Cont...

We used Data Science Method EDA to gain understanding on the relationship between the features and gain more insights. With our calculations it shows that two features account for 75% impact on pricing. We gathered information on resorts per population and resorts per state area. It was necessary to see the relationship between the price and all the features, so we created a function called scatterplots to visualize that. Features vertical_drop, Runs, total_chairs have strong correlation with pricing. After gathering key insights it was time to create a model that can help us solve our problem.



Result Analysis Cont...

After understanding the key insights on the data we begin creating a ML model that will help us predict should Big Mountain increase their price or not. We split the data into training to fit the model and testing to predict pricing for Big Mountain. We implemented different models but we selected random forest model because it performed better. Random Forest model is a supervised classification decision tree model that make predictions.



In the end Big Mountain should increase their price to capitalize on their facilities that are above average compare to the market. This will help them gain more profits and assist in competing with other resorts which they are capable.



