**An Investigation into a Ticket Price Adjustment for Big Mountain Resort**

**The Problem:** What are the opportunities that exist for Big Mountain Resort to increase revenue to pay toward a new chairlift that will increase operations by $1,540,000 annually.

**The Context:** Big Mountain Resort accommodates approximately 350,000 customers annually and charges $81.00 for a ticket ($28,350,000 annually). The price is set at an assumed premium above the average of local resorts but further data driven analysis is necessary.

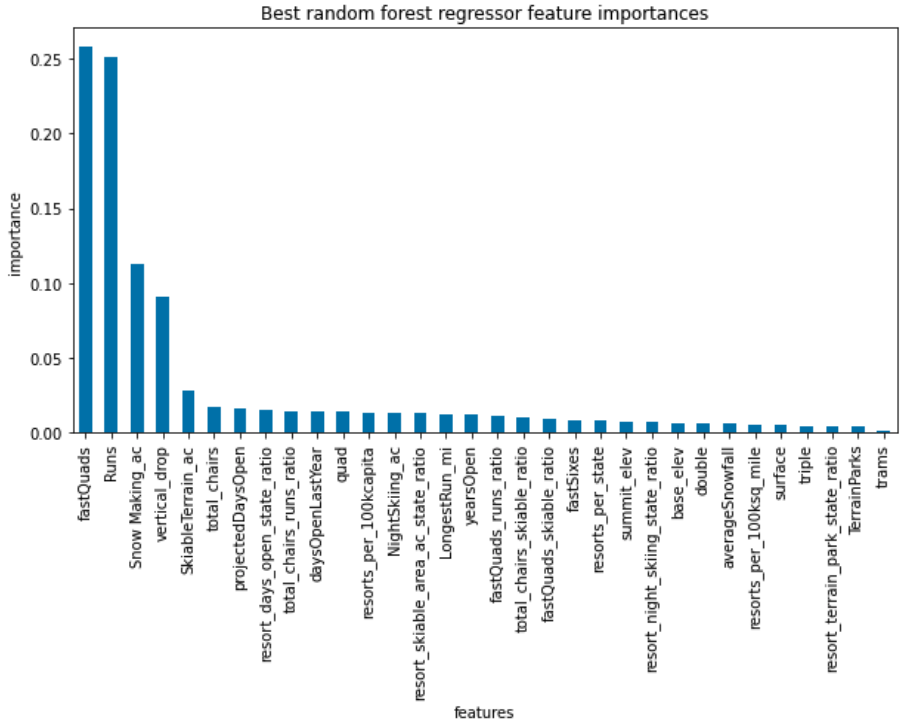
**The purpose of this model:** To provide recommendations for ticket prices based on data driven analysis of competitors pricing and what they offer for that price.

**Limitations:** This model does not include data on non-skiing facilities. Such facilities include restaurants, hotels and other such services in the hospitality business.

**Recommendations:** The model indicates a ticket price increase from $81.00 to $95.87. This will cover the operating costs of the new chairlift several times over.

**Future Investments:** After analyzing the data on facilities, the most important variables in terms of ability to raise prices are:

- Adding additional runs
- Adding additional chairlifts, specifically fast quad lifts
- Extending vertical drop of runs to at least 150 ft
- Adding more snow acres



These results were cross validated using multiple models including the Linear Regression method and the Random Forest method. The model ultimately chosen to make these recommendations was a random forest model.

**Further Model Analysis for Future Decisions:** Big Mountain Resort has the facilities that customer's value most but has yet to maximize on the potential to increase profits. The model has identified facilities with higher capitalization rates.

*The model suggests that:*

Each additional run with a vertical drop of 150 feet and a corresponding lift could support #a ticket price increase of $1.99 ($3,474,638 annually).

Ticket prices should not be decreased unless the number of runs are decreased in increments of three. The data suggests that there is no difference between closing 1 chairlift and closing 2 chairlifts. There also appears to be little difference between closing 3 lifts and 5 lifts. Both actions appear to have the same impact on customers' desire to ski at a given resort.

Additionally, it would be in Big Mountain Resort's best interest to begin collecting the following data:

- Historical visitor volume data,
- Customer demographic data,
- Operational costs of other resorts.

**Conclusion:** The Big Mountain Resort has the facilities to charge a premium for tickets and the ticket price is currently undervalued. I make the following recommendations confidently:

1. An immediate ticket increase of $14.87 ($95.87 total) based on current facilities. This will increase revenue by $5,204,500 annually.
2. Adding an additional run with a vertical drop of 150 feet and a corresponding fast quad lift could support a ticket price increase of $1.99 ($34,746.38)
3. Chairlift closures should occur in groups of three