# Big Mountain Resort Project Report

**Introduction**

Big Mountain Resort (BMR) is a ski resort located in Montana offering spectacular views of Glacier National Park and Flathead National Forest, they installed an additional chair for the next season which will increases the operating costs by $1,540,000. Currently for the ticket price, the resort charges a premium above the average market ticket price for resorts. The management wants to re-evaluate its ticket pricing strategy to better capitalize on all the facilities and infrastructure the resort offers, make better investments decisions, and offset the additional operating costs.

**Observations**

Market data from 330 skiing resorts across the US was analyzed. This data contains the information about the location, facilities, and ticket prices for these resorts. This dataset was used to model the ticket price for a skiing resort based on the facilities the resorts provided as features. It was observed that the BMR current ticket price of $81 is underpriced. The model suggests the ticket price to be $95.87 (+/- $10.53). This shows that the resort has been underpricing its tickets. Based on this result, there is potential to increase the annual revenue by $7.6M to $44.5M depending on increasing the ticket price by $4.34 to $25.4 assuming the resort has 350000 customers with each buying 5 day passes. It was also observed (Fig. 1) that four key facilities influenced the ticket price the most: Fast Quads, Runs, Snow-making and Vertical Drop.

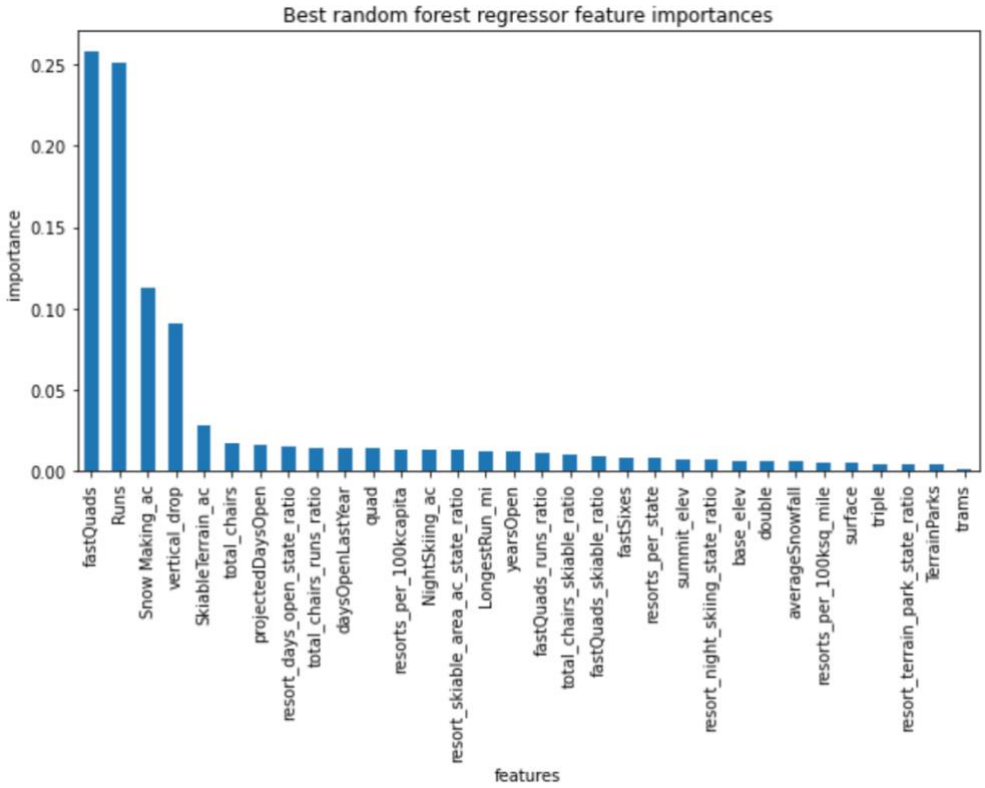


*Figure 1. Random Forest feature importance plot*

**Recommendations**

1. Increase the ticket price from current $81 to $85.34 per day per adult for the next season. This will lead to an increase in annual revenue by 5.4% ($7.6M). This will also offset the additional operating costs associated with the new chair lift. If positive results and feedback are obtained, the ticket price can be increased to a maximum of $106.4.
2. Close one run which is the least popular among the visitors for next season. This is expected to not affect ticket pricing (Fig. 2). If positive results are observed, this would lead to additional cost savings for the business.

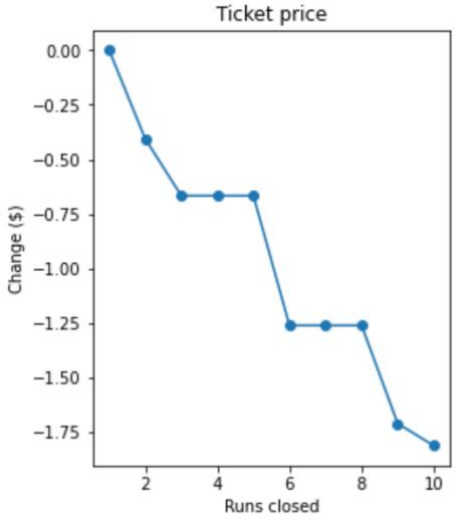


*Figure 2 Change in ticket price vs # of runs closed*

3. Use the model to make investment decisions by running different scenarios. For example, a 150ft increase of vertical drop via a new run and a new chair, could support an increase of $1.99 in ticket price. This could increase the revenue by $3.47M, again considering 350,000 visitors each buying 5 day passes. This will definitely cover the operating cost of the new chair; however, this needs to be evaluated further in terms of capital costs for each new infrastructure.