

# Big Mountain Resort Report

- Suggestions for Revenue Increase -

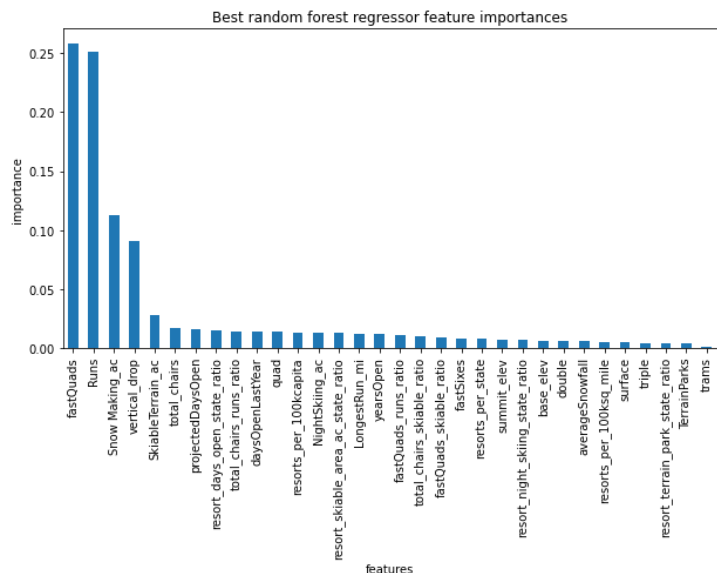
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## 1. Project Background

Big Mountain Resort has recently installed an additional chair lift to help increase the distribution of visitors across the mountain. This additional chair increases their operating costs by \$1,540,000 this season. The resort's pricing strategy has been to charge a premium above the average price of resorts in its market segment. And there's a suspicion that Big Mountain is not capitalizing on its facilities as much as possible. Basing our pricing on just the market average does not give the business a good sense of how vital some facilities are. Our goal is to find some guidance on selecting a better value for their ticket price based on data. If available, we can suggest several changes that they hope will either cut costs without undermining the ticket price or support an even higher ticket price.

## 2. Data

We choose the data set, which contains 330 ski resorts in all-state. After the cleaning, processing, and training the data, we obtained a random forest model, which shows that the dominant features are common with your linear model: 'fastQuads,' 'Runs,' 'Snow Making\_ac,' 'vertical\_drop'. This model was used to gain insight into what Big Mountain's ideal ticket price could/should be and how that might change under various scenarios. (*details:* [link](#))



### 3. Ticket Price for Big Mountain Resort

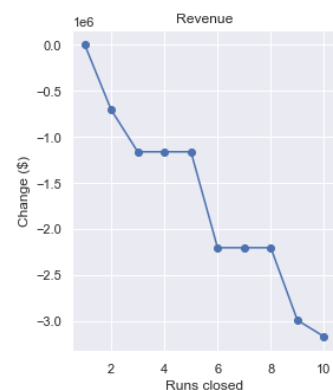
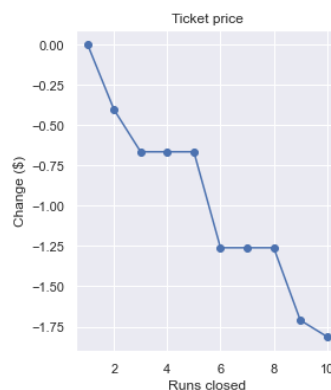
The Big Mountain Resort's ticket price of \$81.00 is higher than other resorts. However, our resort's modeled price is \$95.87. Therefore, even with the expected mean absolute error of \$10.39, there is room for an increase. Furthermore, if the price ticket is increased to \$95.87, it leads to an annual revenue increase of \$2,602,250, which is more than the increased operating expenses of \$1,540,000. (details: [link](#))

### 4. Suggestions and Revenue Changes

If the resort considers raising the ticket price through several changes, the following could be the options.

- (a) Permanently closing down up to 10 of the least used runs:

This suggestion will cause the price to go down. And the annual revenue will be decreased by up to about \$3,170k. But if the closing reduces annual operating expense more than that, it is worth considering closing the runs. Furthermore, in the



case of the closing only one run, the model says closing one run makes no difference. Therefore, to close only one run is worth trying.

- (b) Adding a run, increasing the vertical drop by 150 feet, and installing an additional chair lift: This suggestion increases support for ticket price by \$1.99. Therefore, over the season, this could raise the revenue by about \$3,474k.

### 5. Further discussion

To better verify net income increase, we need to not only revenue but also expenses.

Therefore the following data is required;

- (a) Operating expense: How much cost is expensed for each facility.
- (b) Investment expense: How much cost is required to install each facility.