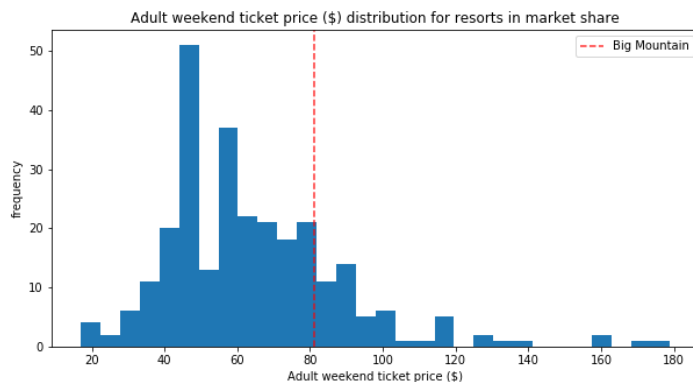


Big Mountain Resort: Predicting Ticket Price from Resort Features

Current Pricing

Big Mountain Resort (BMR) boasts an impressive profile of ski resort features. Its yearly 350,000 visitors enjoy access to 3000 acres of skiable area, including over 100 ski runs, via 14 lifts spanning nearly half a mile of vertical space. Until now, however, business leaders at BMR



had to guess what ticket price was appropriate for their resort. Their current facilities clearly already support charging a premium above the market average, but it's not clear how much more the resort could charge. The current adult ticket price is set at \$81, compared to the average \$64 (see figure to the left). On average, each of the visitors stays at the resort for 5 days, meaning the current price represents an annual revenue of \$141.75 million.

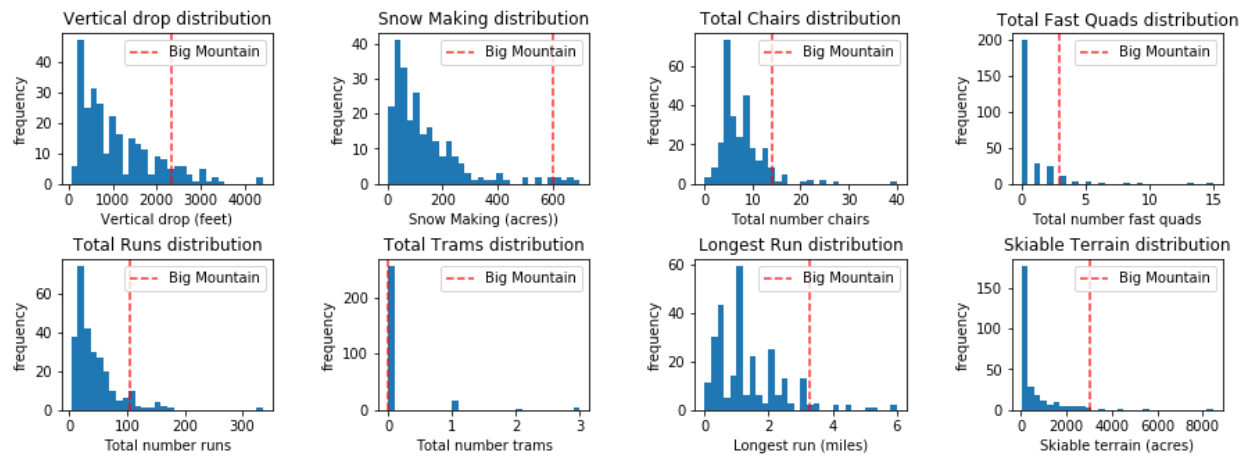
A newly installed ski lift is predicted to raise operating costs by \$1.54 million in the coming season. In consideration of raising revenue to cover the increased cost, BMR wants to get a better, evidence-based estimate of the value of their individual resort features. Using data from resorts across the country within the market share, we can model the relationship between resort features and ticket price. This model will give us two huge insights to inform pricing decisions. First, what price should BMR currently be charging based on consumer demand for resort features? Second, which resort features are the most important factors in determining ticket price, indicating facilities that are good targets for future investment or cost cutting?

Model Results

The best model found to fit the data was able to predict the price of an adult weekend ticket at a resort with an average error around \$9–\$11. Based on the features of Big Mountain Resort, the model predicted a price of \$94.22. In other words, a resort like BMR in our market share would probably have a price within the range of \$83–\$105. Therefore, the model suggests BMR is underpriced.

Let's consider the lowest end of the range predicted by our model. Based on our average visitor's length of stay, if BMR raised the ticket price to \$83 (an increase of \$2), it would represent a revenue increase of \$3.5 million. Clearly, this would support the added cost of operating the new lift, with another 1.45 million left over to invest in other areas.

According to the data, there are a few features that help the most to determine ticket price across resorts. These features include the total vertical drop, total number of lifts, number of fast quad lifts, acres of snow making coverage, total acres of skiable terrain, number of runs, and number of trams. Notably, with the exception of trams, BMR ranks with or near the highest resorts in each of these features across the market share (see below).



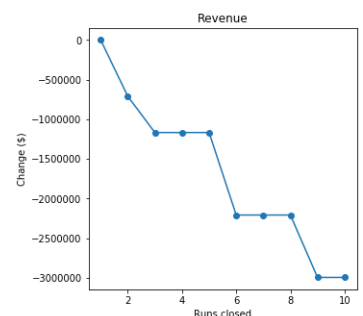
Future Actions

As Big Mountain Resort leadership consider what business decisions should be made based on the model results, they should use the results as a suggested starting point, and not as an exact market valuation of the resort's features. Aside from the \$10 average error mentioned above, the data also depends on other resorts' prices reflecting the actual value of their own feature profile. Noting that BMR was underpriced compared to the other resorts, it is reasonable to suppose that at least some resorts in the dataset are also over- or underpriced, due to their individual pricing strategies. Furthermore, there may be other resort features not included in this dataset that could have an influence on ticket price, for instance operating cost and number of visitors per year. Finally, as BMR is already the most expensive resort in the state, large increases in price may have unintended outcomes affected by the local market.

That said, we can still gain some key insights into the most effective investments to justify higher prices, and where there may be room to cut costs without sacrificing ticket price.

Of the four scenarios proposed by BMR leaders, options 1 (closing the least popular runs) and 2 (increasing the vertical drop with a new run and lift) were the most promising, based on the resulting predicted ticket price. BMR can close one run with no effect on ticket price. Further closures will affect price, so leadership must weigh the reduction in operating costs with the reduction in revenue.

Scenario 2 supported raising the ticket price by \$2 (above the predicted price for current features), reflecting a revenue increase of another \$3.5 million. The model does not predict that additional Snow Making acreage would increase ticket price. However, leadership should carefully consider the model's conclusions. Perhaps the lower altitude of the new run means natural snowfall is lower. A run often closed due to lack of snow would not gain the market benefit that the model expects.



Overall, the model recommends an immediate increase of ticket price by at least \$2–\$13. Business leaders at Big Mountain Resort should use their market knowledge to decide what price increase is appropriate for the coming season. Further strategies to maximize revenue include closing at least one existing run, and adding a new run and lift that increases the vertical drop. Paying close attention to the other important features identified by the model, such as fast quad lifts, will give the business an even greater advantage for attracting visitors who are willing to pay a significantly higher price for their ticket. With further improvement in these areas over the next few years, Big Mountain Resort could count itself among the top revenue earning resorts in the market share.