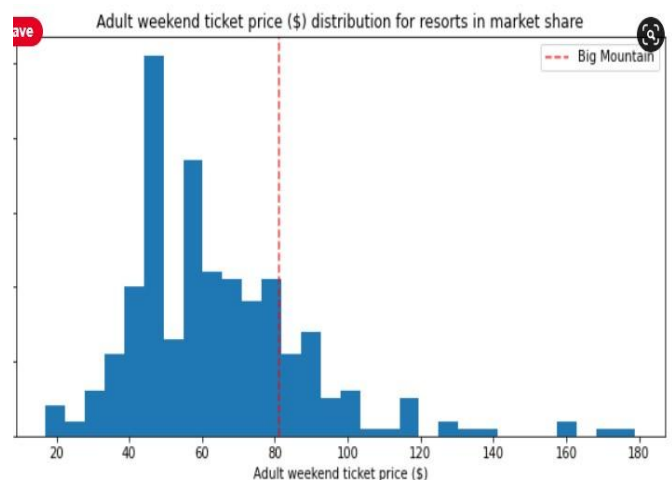
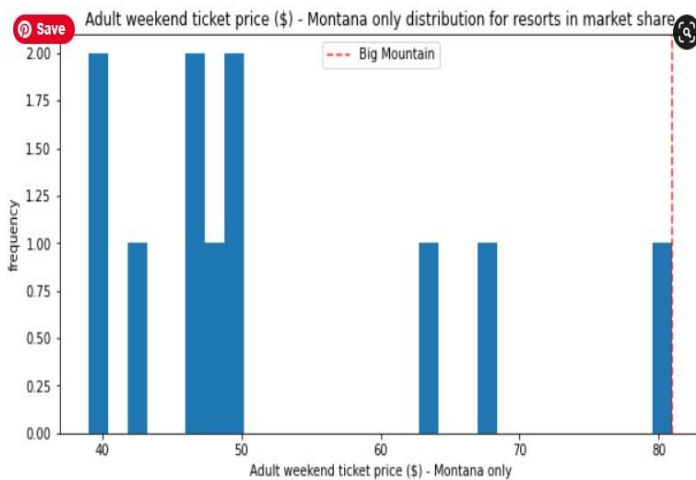


**Recommendations for revenue improvements via adult weekend ticket pricing market analysis and predictions, also considering the cost reduction and capital expenditure modeling scenarios previously identified.**

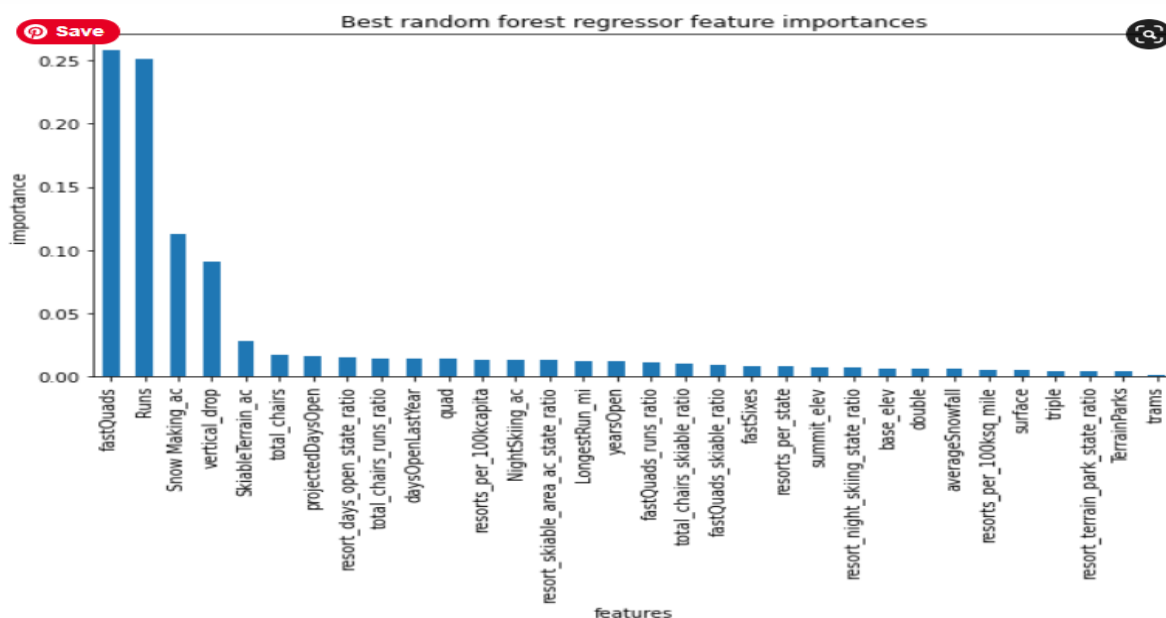
## Target Feature: Adult Weekend Ticket Price Analysis

Adult weekend prices have the least missing values of the prices available in the data thus providing a more accurate model. US market data from 330 competitors across the US suggests that the current adult weekend pass ticket is underpriced. According to our most confident Random Forest model, the current market justifies a price increase from the current \$81 to \$95.87 (+/- \$10.53), given our unique resort attributes in comparison to the competition. Assuming we again have roughly 350,000 customers who purchase 5 tickets this season, an increase of only \$.88 per ticket would cover the upcoming season's additional operating cost of 1.54 million for the newly added chair. This price optimization discovery also leaves plenty of additional room for unrealized revenue. Even reducing the suggested price of \$95.87 by its mean absolute error of \$10.39, would lead to an annual revenue increase of around \$6.055MM (\$3.46/day/ticket).



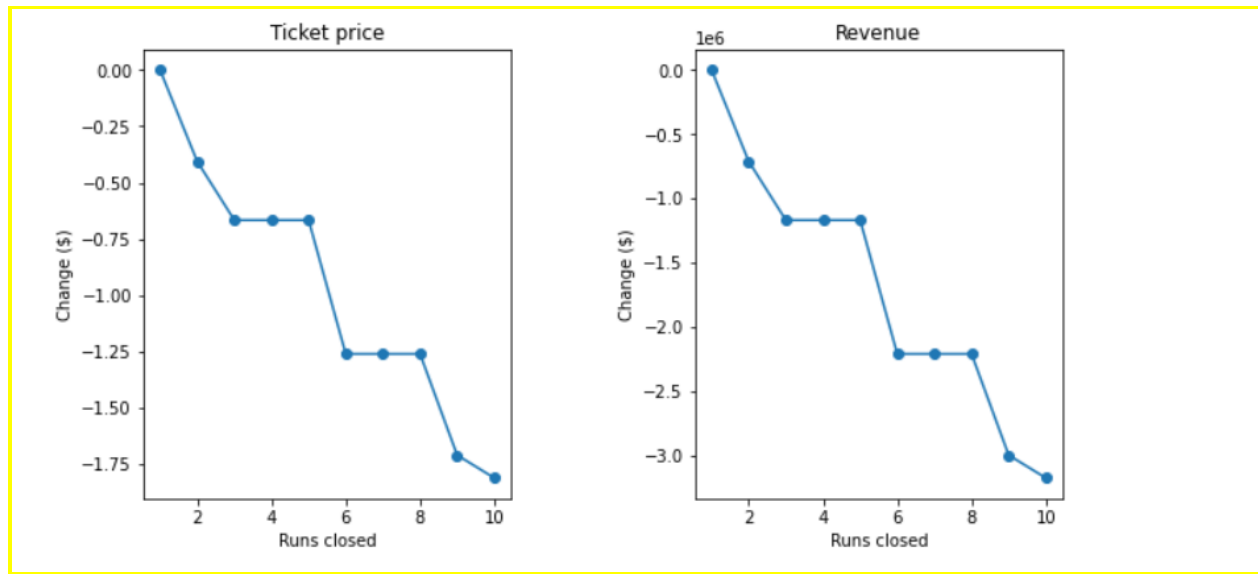
## Key Features

Of the 32 resort features evaluated in the study, there were 4 key features that impacted ticket prices the most. Fast Quads, Runs, Snow-making, and Vertical Drop. The top 8 of the below features were used to model the identified business options to reduce cost or invest in features and the impact on ticket price.



## Cost Reduction Scenario: Close Up to 10 of the Least Used Runs

A single run may be closed with no impact on the ticket price. Up to 6 runs may be closed while only decreasing the ticket cost by less than a dollar according to the market match modeling based on features. After that, the ticket price value will decrease more drastically. Consider that Big Mountain compares well for the number of runs. There are some resorts with more, but not many. This is a unique feature.



## Capital Expenditure Scenarios

Each of the proposed improvements created the same ticket increase opportunity of \$1.99 or \$3,474,638 of potential additional revenue per season. However, the longest run feature was of least significance when selecting features with the Random Forest model (the cross-validated most optimal model chosen).

## Recommendations

1. Increase adult weekend ticket prices close to \$85.34 (\$95.87 suggested model price reduced by its mean absolute error of \$10.39) to cover upcoming operating cost increases and realize lost revenue potential.
2. Conduct one least used run closure, calculate savings and see if that savings is great enough to justify a decrease in revenues for further run closures, based on projected ticket value decreases per run closure. Don't get too carried away as having more runs than much of the competition is a desirable feature.
3. Select the capital expenditure option that requires less initial investment and ongoing operating costs to realize a ticket price increase of roughly \$1.99. This will more than offset the decreases for run closures. You can invest in both, but make sure added costs don't negate the ticket increase offset.
4. Continue data sourcing for enhanced modeling capabilities and update model data regularly. It is possible that our model is missing some key data such as operating/maintenance costs and capital expenditure costs for snowmaking, adding chairs and trams, etc. Detailed pricing data like historicals would help us explore more hyperparameters. Child pricing, group pricing, and other package pricing structure data would help us make sure we are matching diverse ticket offerings at their market rates. Visitor number counts and data points like days, times, and facilities/feature use counts would be even more helpful to compare feature demand.
5. Evaluate ticket sales and revenue performance to verify success.

## Conclusion

With this model, you can evaluate decisions more confidently and have a sense of how facilities and features support a given ticket price. If maintained, it could be developed into a plug-and-play strategy tool for decision-makers to generate pricing predictions that are tuned to the market for possible scenarios being considered. Most importantly, you will have fewer hidden revenue opportunities, with the assistance of an analyst.