The Big Mountain Ski Resort - Data analysis

Do We Have The Right Ticket Prices?

Problem Identification

Can we increase the weekend ticket prices by 20% to increase the revenue by the next quarter?

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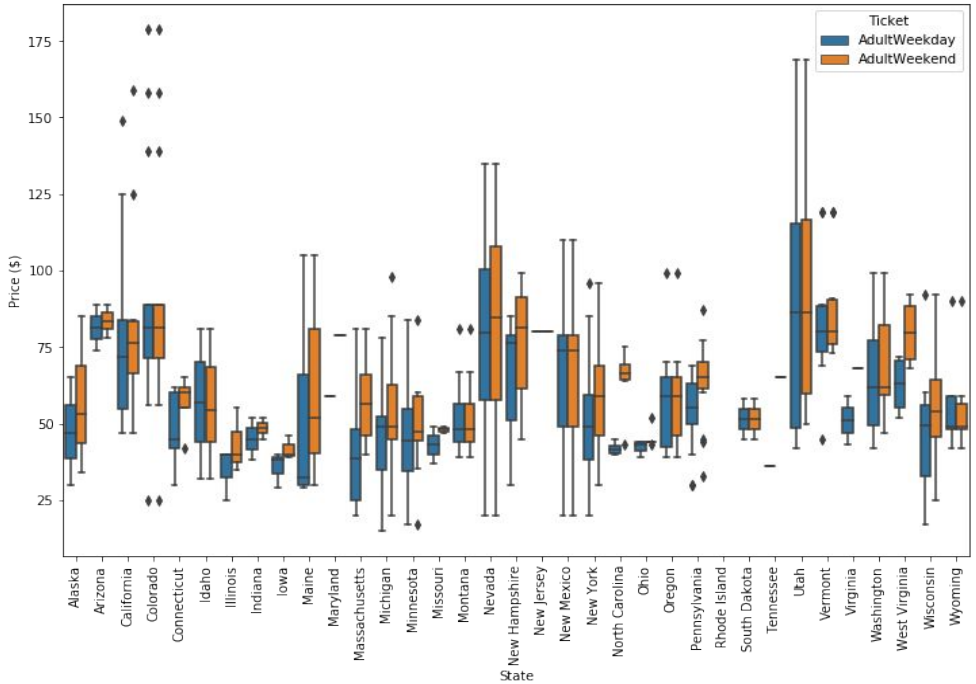
Why do we want to increase the ticket prices?

- Ticket prices are set based on the market average - currently $81
- We might be undervaluing our facilities
- Increased operational costs

Recommendation and key findings

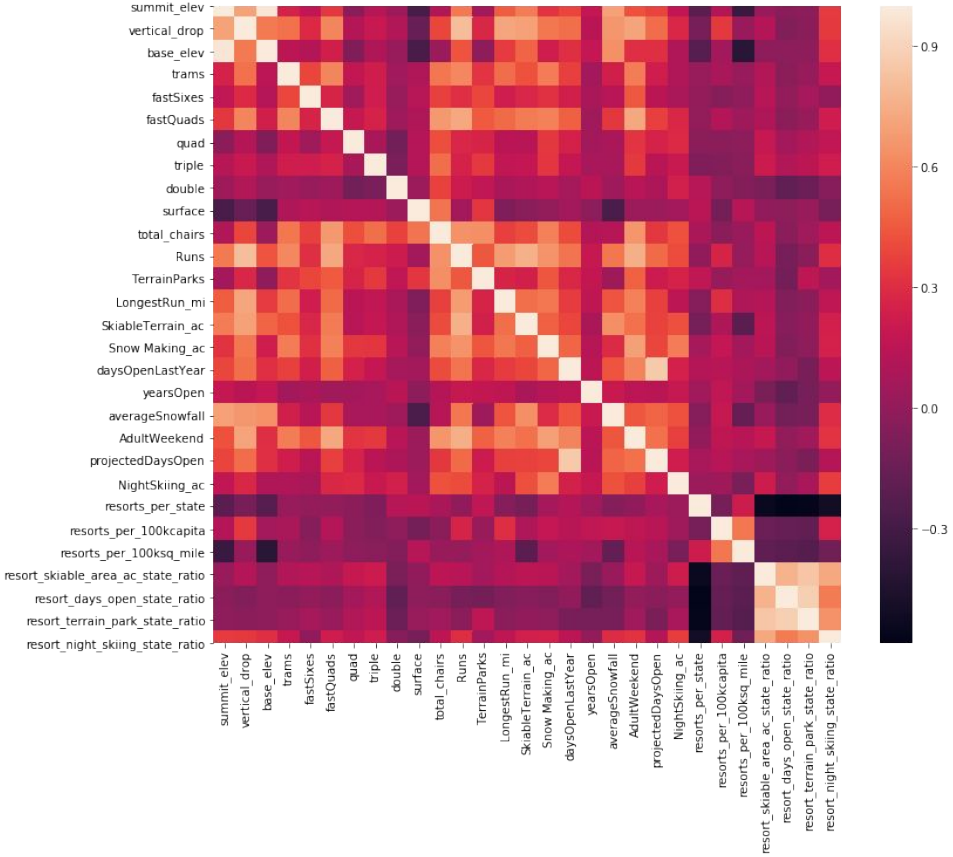
- Weekend ticket prices can be increased by $3 (considering mean absolute error)
- Increasing the vertical drop and adding a chair lift supports an additional ticket price hike of $2
- Closing one run will not have an impact on the revenue or ticket price but closing more than 2 runs will cause a revenue drop
- Increasing the snow terrain does not support a price hike

Modeling results and analysis

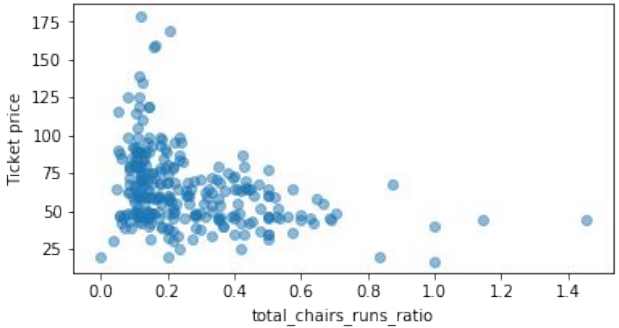


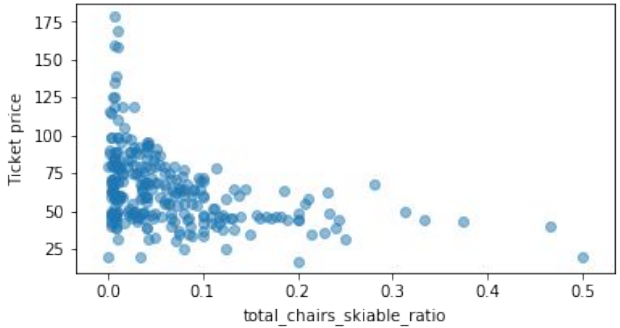
Typical ticket prices range between $25 and $100. Mostly weekday and weekend prices are similar.

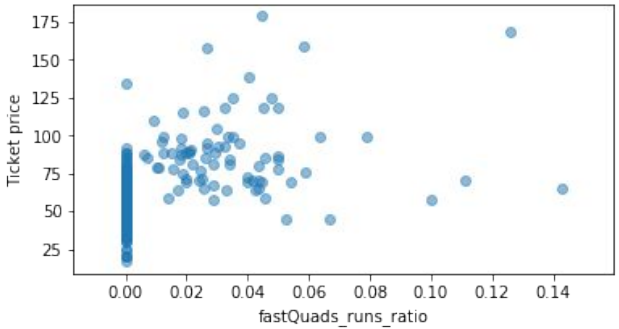
Modeling results and analysis
Correlation between features

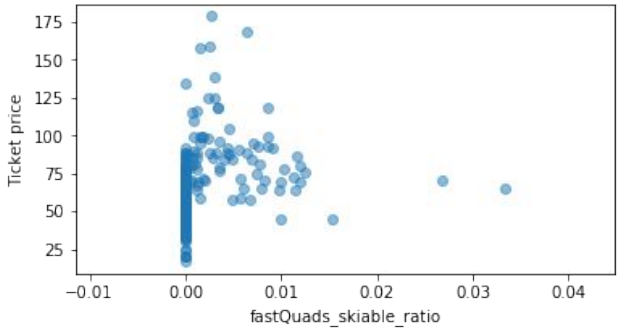


Modeling results and analysis
Important features vs ticket price



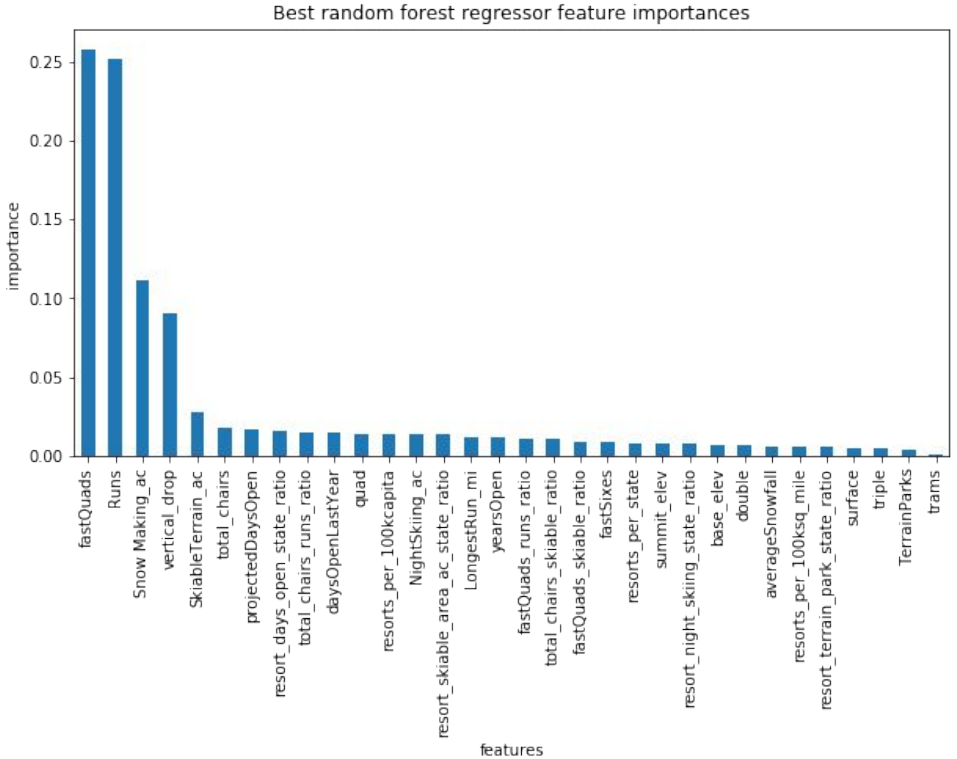




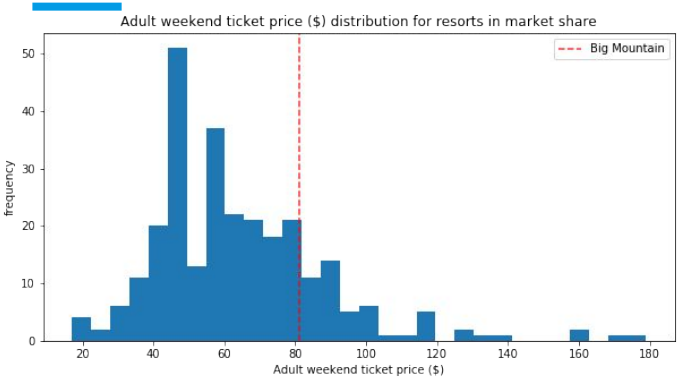


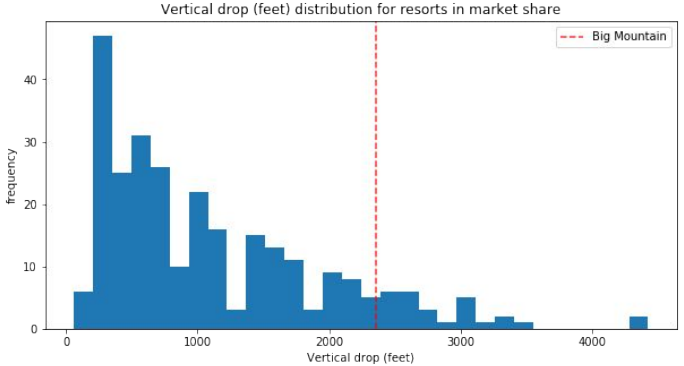
Modeling results and analysis
Most important features

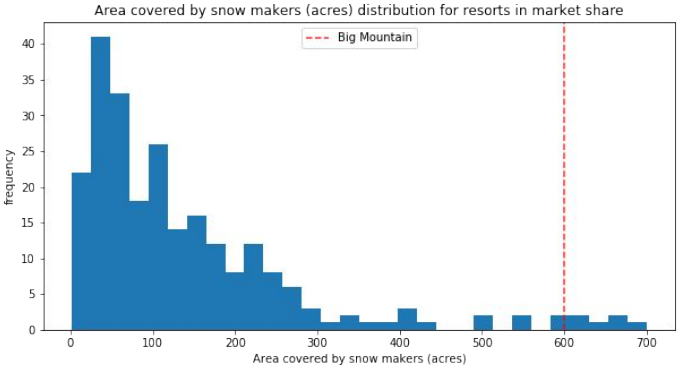
Random Forest Regressor had better statistical markers than linear regression or the baseline model (predicting average price).

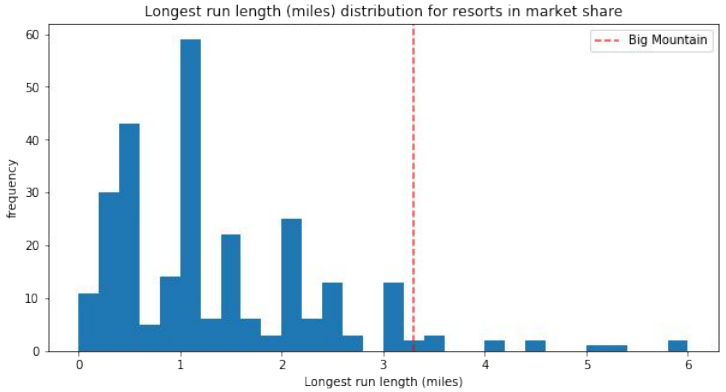


Modeling results and analysis
Our resort is on the higher end!









Summary and conclusion

- Random Forest regressor was used to model the problem
- Target feature was adult weekend ticket price
- The resort is among the largest snowmaking areas with the total number of chairs, fast quads, number of runs, the longest run, and skiable terrain
- The vertical drop, total number of chairs, fast quads, number of runs, the longest run, and skiable terrain are the most important features that impact the price of a ticket
- The analysis supports a price hike about 3% not 20%
- Increasing the vertical drop and adding a chair lift supports a price hike of $2

Thank you!