

Big Mountain Resort



Problem Identification

Planning: invest an addition chair lift, and charge the price above the average market price

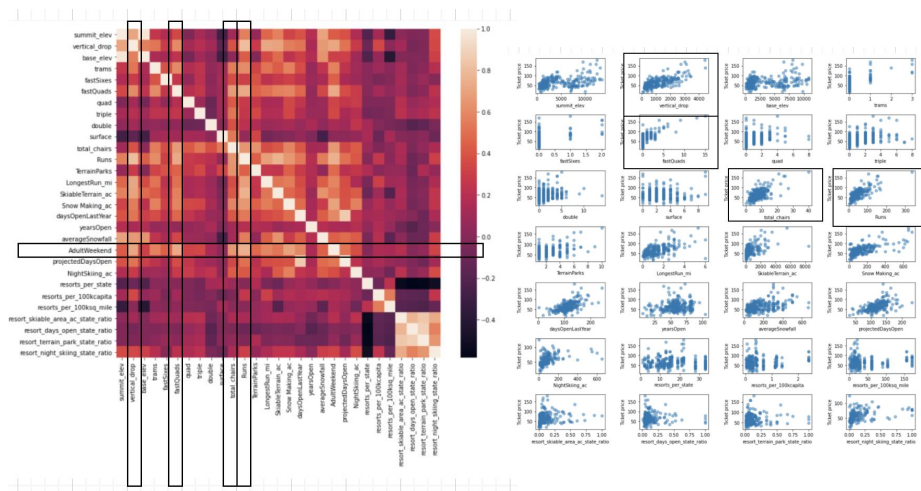
Operating cost: increase by \$1,540,000 this season

Goal: identify the competitive ticket prices, and opportunity to improve the profit.



Important factors affect the price

- Top 4 features: Vertical_drop, FastQuads, Total_chairs and Runs
- Big Mountain predict price: \$94.22
- Mean absolute error: \$10.39



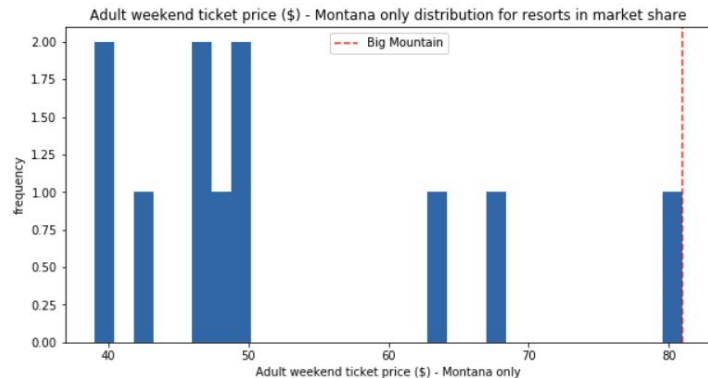
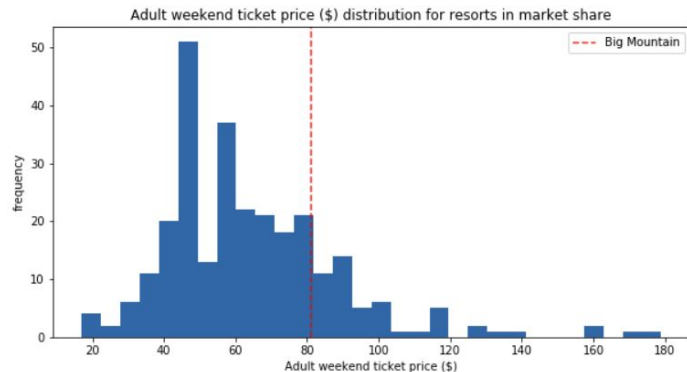
Heatmap

Scatter plot

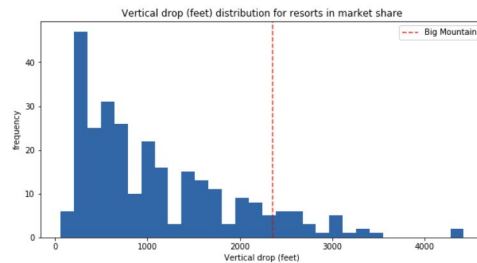
The relationship between ticket price with other features

Model results and analysis:

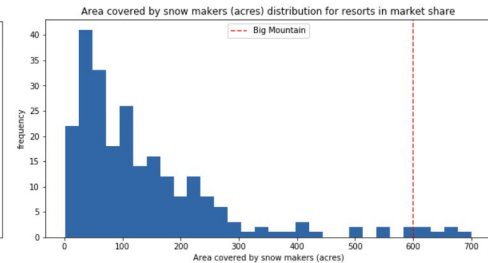
Ticket price distributions of Big Mountain comparing to the market, and Montana state.



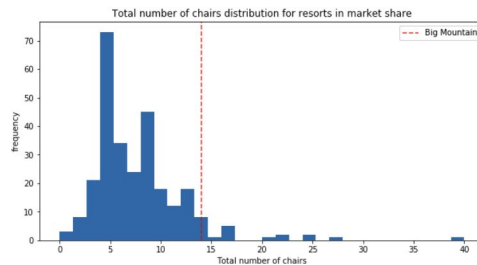
Distributions of top 4 features



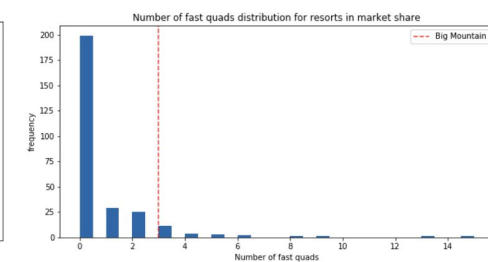
Vertical Drop



Snow making area



Total number of chairs



Fast quads

Recommendations

Two model scenarios can increase the ticket price to \$2 more that can increase the revenue to **\$3,464,638**:

- Adding a run to increase the vertical drop by 150 feet, and installing an additional chair lift (as planned).

OR

- Adding 2 acres of snow making cover



Conclusion

Big Mountain resort can improve in the next coming year, particularly with an extra lift chair. The business can raise the ticket price to a competitive value compared to the market rate and still generate high increase in revenue.