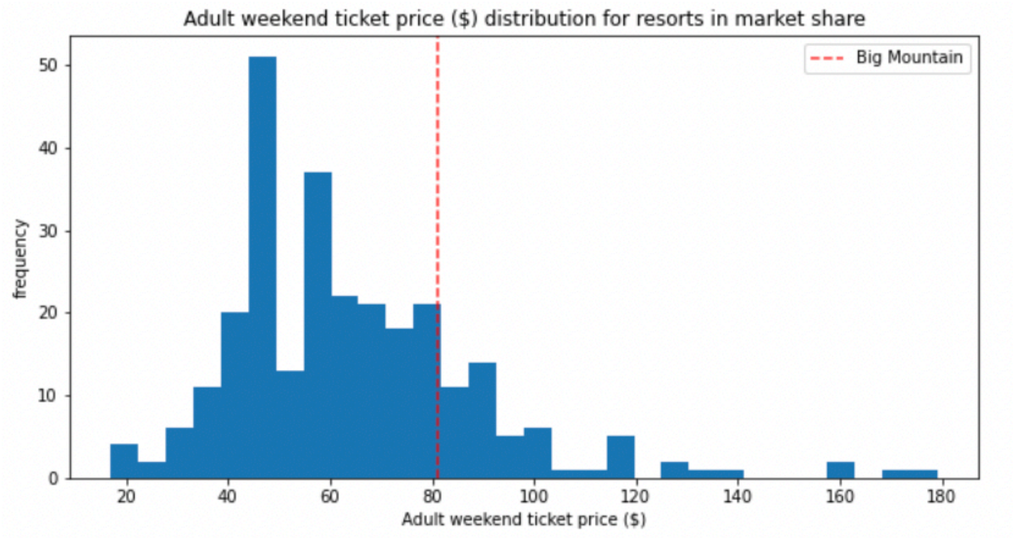
Big Mountain Resort

Ticket Price Change and Recommendations

Nicholas Mai, March 2021

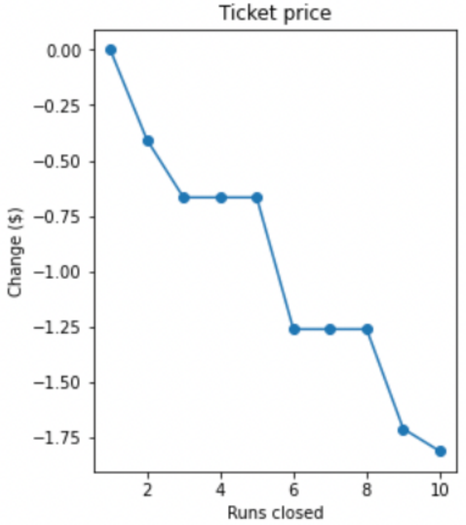
Problem: Current ticket prices are undervalued

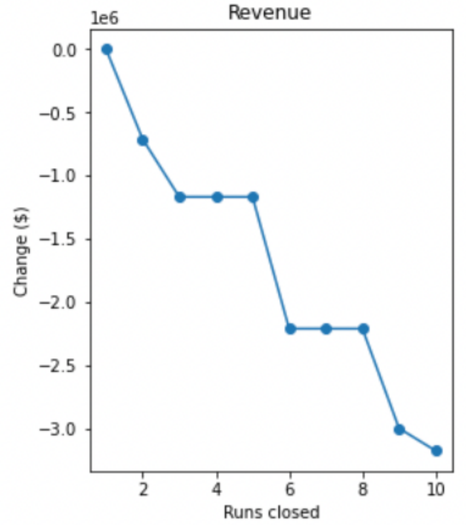
- Current ticket prices are $81/adult based on the market share's average
- New chairlift increases annual operating costs by $1.54M
- Big Mountain Resort has some of the largest facilities in their market share
- **Goal -** Raise ticket price that reflects the resorts value and cover new operational cost



Recommendation: Raise Price to $95/ticket

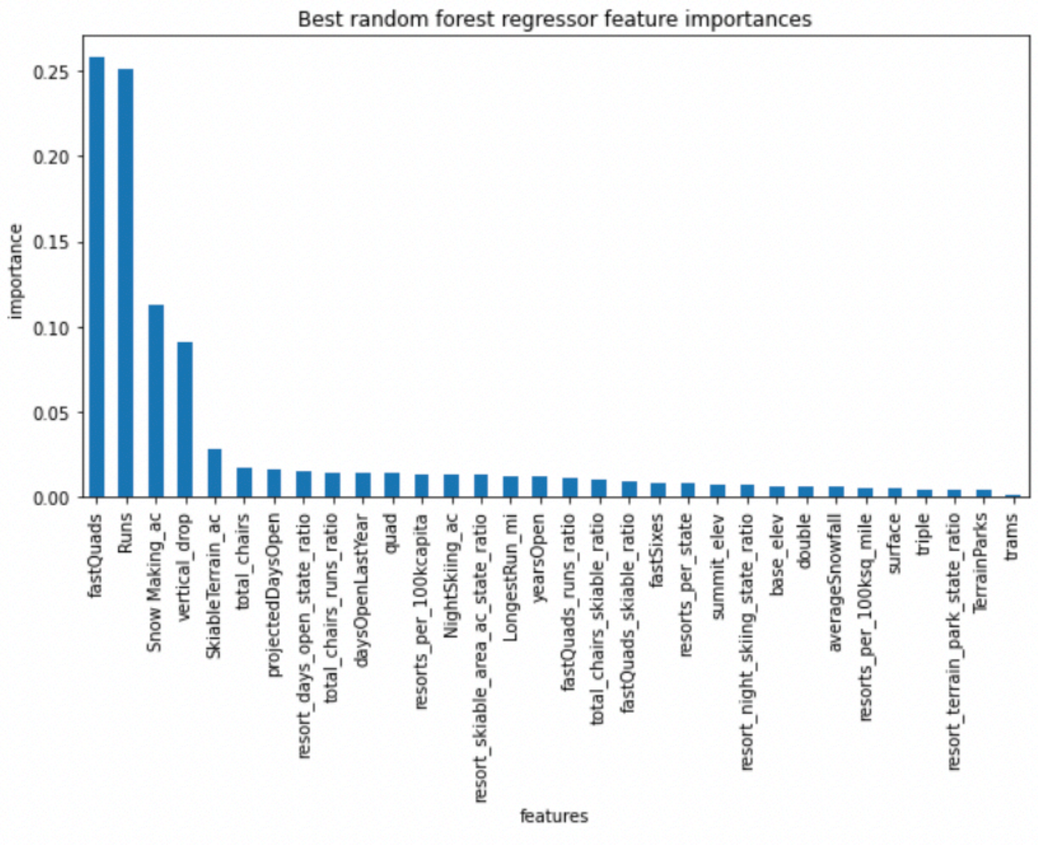
Recommendation	Justification	Implementation Plan
Raise ticket price to $95/ticket	Based on the model's expected price given market share's facilities	Conduct A/B advertising campaigns and/or focus groups
Add a run to increase vertical drop by 150 ft	Increases ticket value by $2 Expected increase in revenue will cover expected operational costs	Close 1 run for construction
Close least popular run	Closure of 1 run will not decrease the value of the resort's facilities	Close 1 run





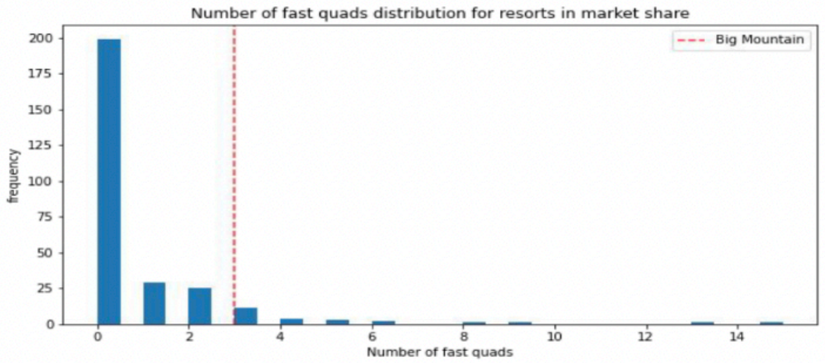
Modeling/Analysis (1 of 3)

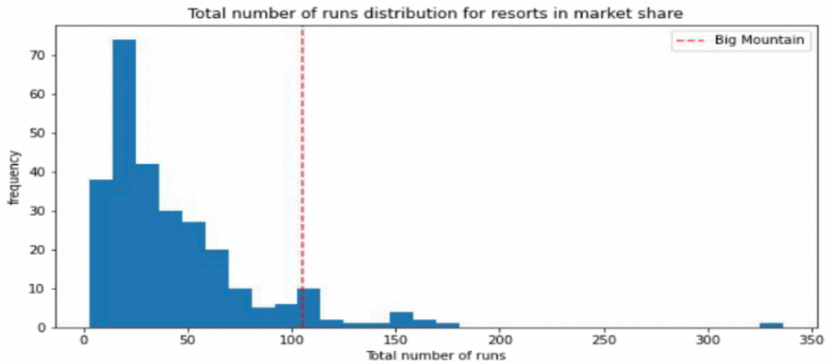
- Random Forest model was the best fit for this data set
  - Lowest mean absolute error of 9.43
  - Expected ticket price increase of $14/ticket is greater than potential error, thus, further supporting an increase in ticket price based on current facilities compared to market share
- Top 4 features in figure were used to test modeling scenarios to generate recommendations

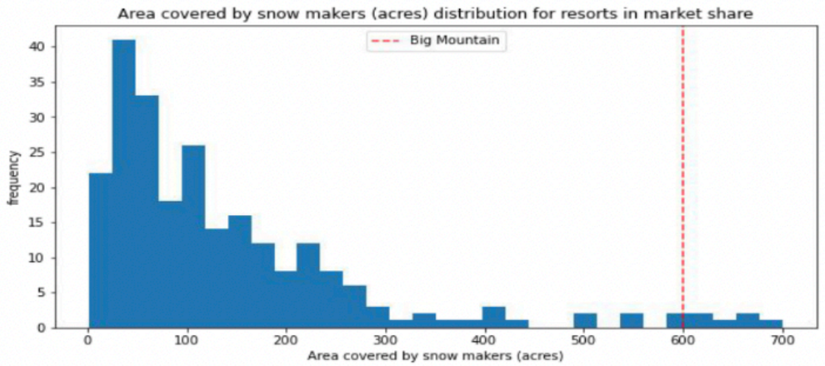


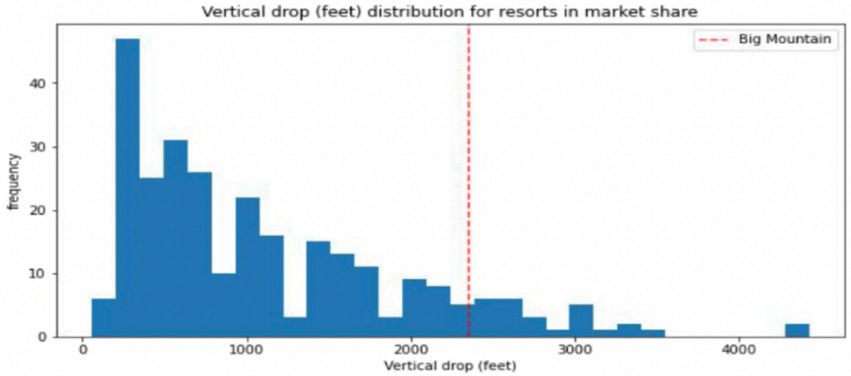
Modeling/Analysis (2 of 3)

- Big Mountain Resort's facilities are largest in the market.
- Larger resorts are most likely outliers in the dataset.



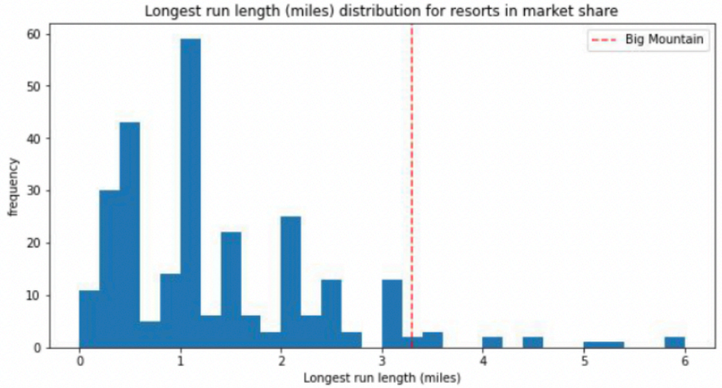


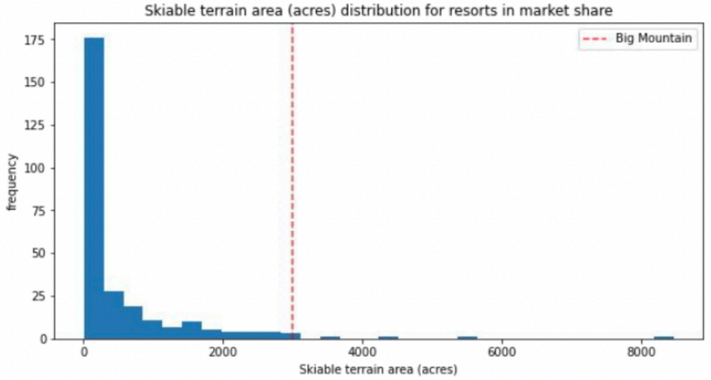




Modeling/Analysis (3 of 3)

- Adding 0.2 miles in run length did not increase value in ticket price
- Other features analyzed shows Big Mountain outsizes competitors (except trams, however most resorts do not have trams)





Conclusion

- Ticket price should increase to max $95/ticket
- Increasing vertical drop through an addition of a new run could increase ticket value
- Closure of 1 run will not decrease ticket value
- Next steps
  - Test new ticket price (A/B testing)
  - Implement recommendations
  - Verify new ticket price justifies ROI of new chairlift
  - Create a portal for business analysts to continue modeling and testing ticket price with data science