Big Mountain Resort Ticket Price Change

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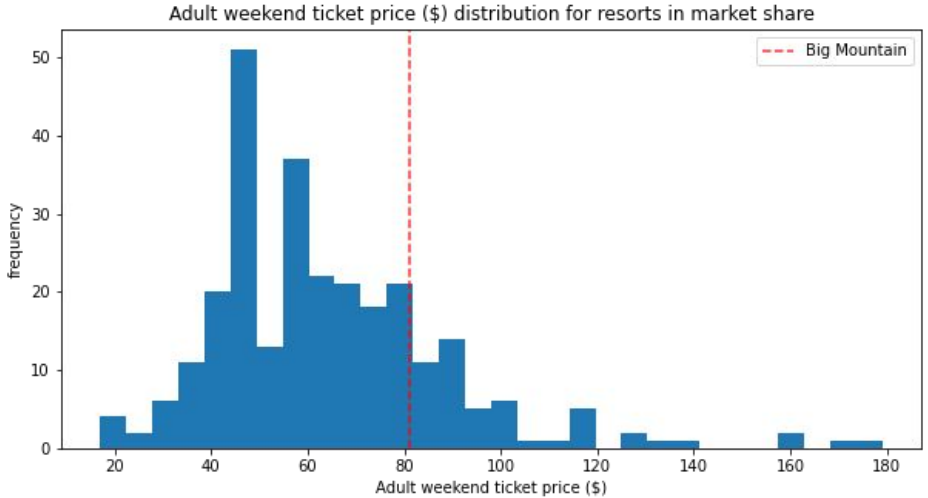
May 2021

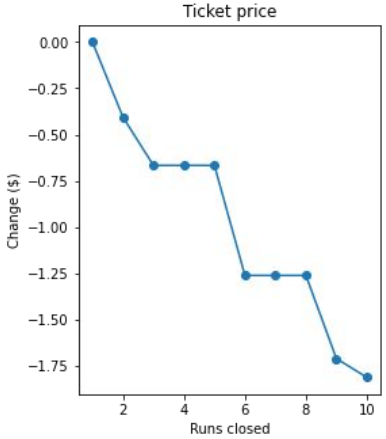
Problem: Current tickets are undervalued

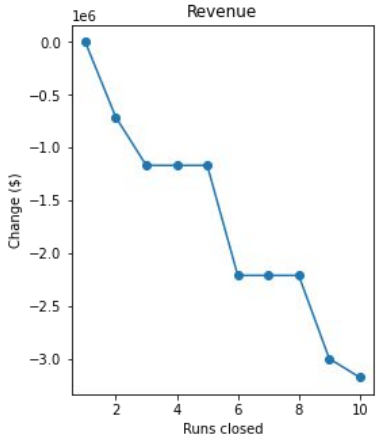
- Current ticket price of $81/adult is based on market share's average.
- New chair lift has $1.54M of annual operational costs.
- Big Mountain Resort is not average. They have one of the largest facilities in its market share.
- **Goal:** raise price to reflect resort's value and cover new operational costs.



Recommendation: Raise price up to $95/ticket

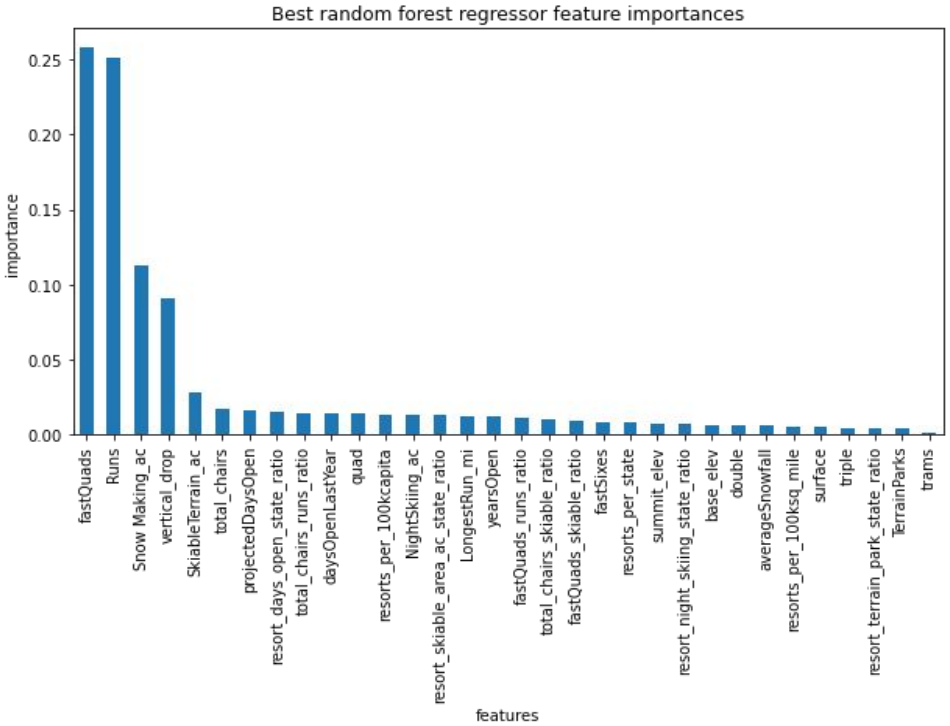
Recommendation	Justification	Test/Implementation Plan
Raise ticket price up to $95/ticket	Based on model's expected price given market shares' facilities	A/B Testing in online advertisements
Add run for additional vertical drop of 150ft	Increases ticket value by $2 Extra operational costs for new chair lift can be covered by expected revenue	Close 1 run for construction
Add 2 acres of snowmaking area	Increases ticket value by $2	Close 1 run for construction





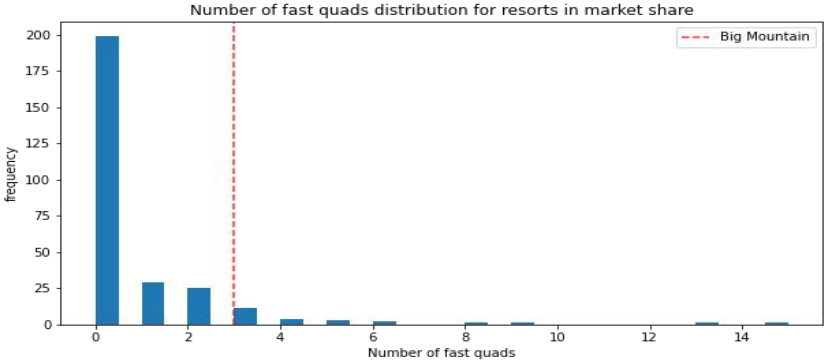
Modeling/Analysis (1 of 3)

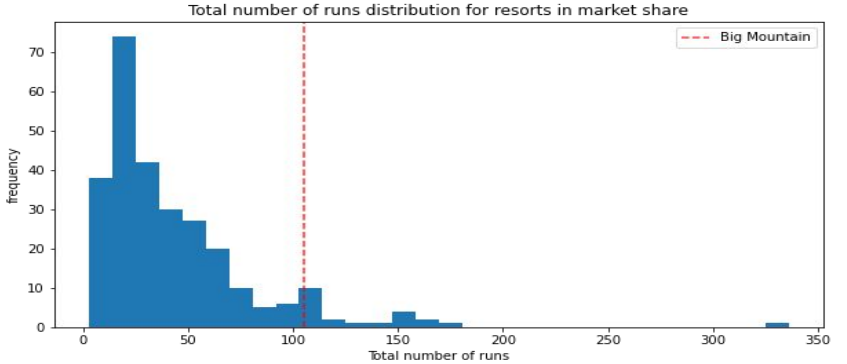
- Random Forest model was the best for this dataset
  - Lowest mean absolute error: $9.53
    - Expected ticket price increase of $14/ticket is greater than potential error. This further supports that ticket price should increase
- Top 4 features were used to test modeling scenarios that generated recommendations

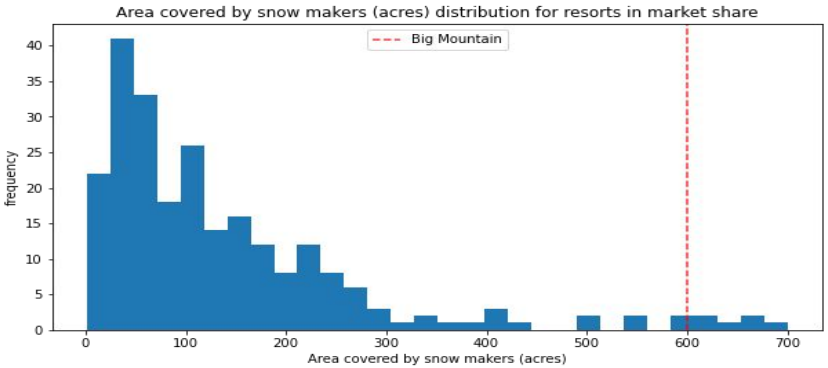


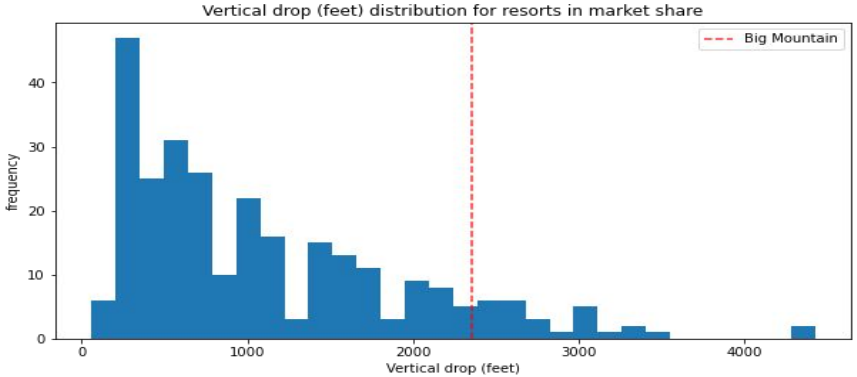
Modeling/Analysis (2 of 3)

Big Mountain's facilities are the largest in the market. Those that are larger are more likely outliers.



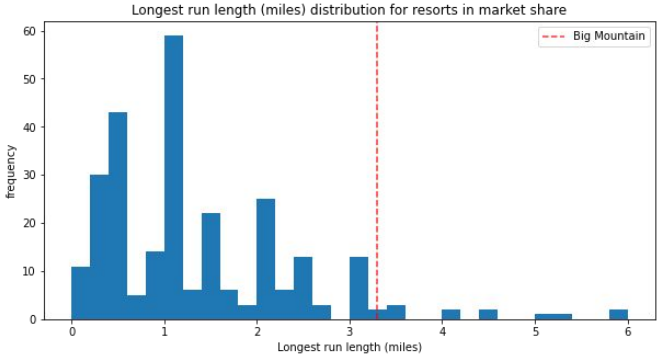


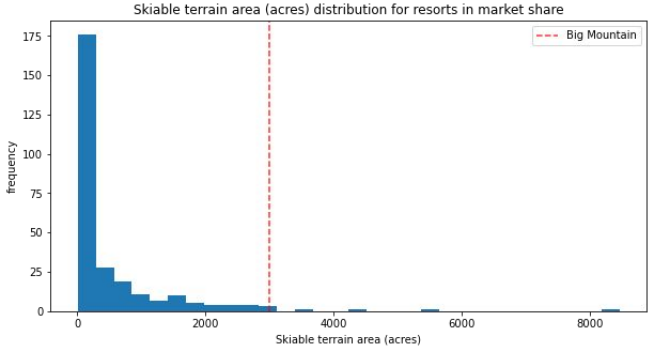




Modeling/Analysis (3 of 3)

- Adding 0.2mi to increase run length did not make ticket price more valuable
- Other features analyzed also show Big Mountain Resort outsizes competitors (except trams -- most resorts also don't have trams)





Conclusion

- Ticket price should be raised - max $95/ticket
- Increasing vertical drop and snowmaking area could help raise value
- Next Steps:
  - Test new ticket price
  - Implement recommendations
  - Check if new ticket price justifies ROI of chairlift and makes profit given untested cost data
  - Create a portal for business analysts to continue monitoring and testing ticket price with data science model