

# Big Mountain Resort Price Recommendation

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# Big Mountain Ski Resort

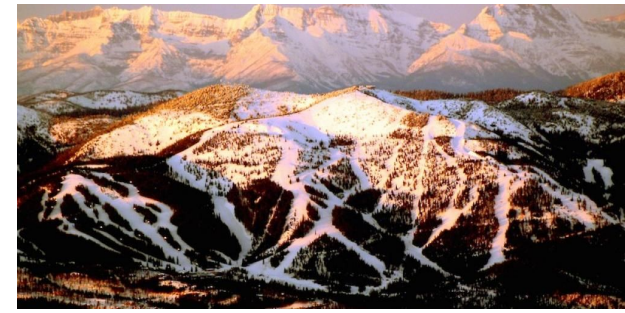
- Located in Montana.
- Accommodates 350,000 tourists every year.
- Offers spectacular views of Glacier National Park and Flathead National Forest, with access to 105 trails.
- Features - 11 Lifts, 14 chairs, 2 T-bars and 1 Magic carpet



<b>Longest run</b>	<b>3.3 Miles</b>
<b>Base Elevation</b>	<b>4464 ft</b>
<b>Summit</b>	<b>6817 ft</b>
<b>Vertical Drop</b>	<b>2353 ft</b>



# Problem and Project Statement



- They installed an additional chair which has increased operational costs by more than \$1.5 million
- Management suspects that it might not be maximizing returns relative to other resorts.
- They also don't have most marketable facilities for visitors
- **Purpose** - Generate predictive pricing model based on its existing facilities
- Evaluate different scenarios of manipulating facilities and how they affect overall revenue
- This model will be used to provide guidance for ticket pricing and future facilities investment.



# Data Wrangling and Cleaning

- Original data had 330 rows and 27 columns.
- The final cleaned dataset had 276 rows and 25 columns.




# Modeling Results

- Random Forest Model was seen best fit and was trained and optimized with the provided resort data.
- Model result price is 95.12.
- There is room for increase even with an expected mean absolute error of \$10.41



**Current Adult  
Ticket Price - \$81**

A purple cloud-shaped callout bubble with a black outline, containing text about the current ticket price.

**Predicted  
ticket price  
- \$95.12**

A green starburst-shaped callout bubble with a black outline, containing text about the predicted ticket price.

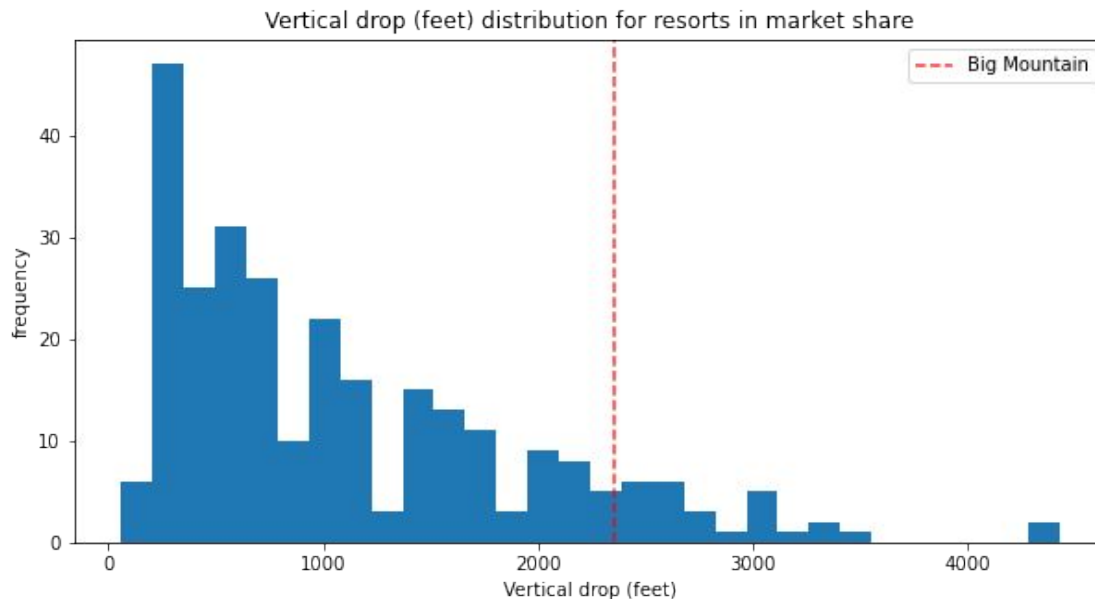
## Other features predicted by the model correlated to ticket prices

- Vertical drop (top priority)
- Snow making\_ac
- Total chairs
- Runs
- Skiable Terrain



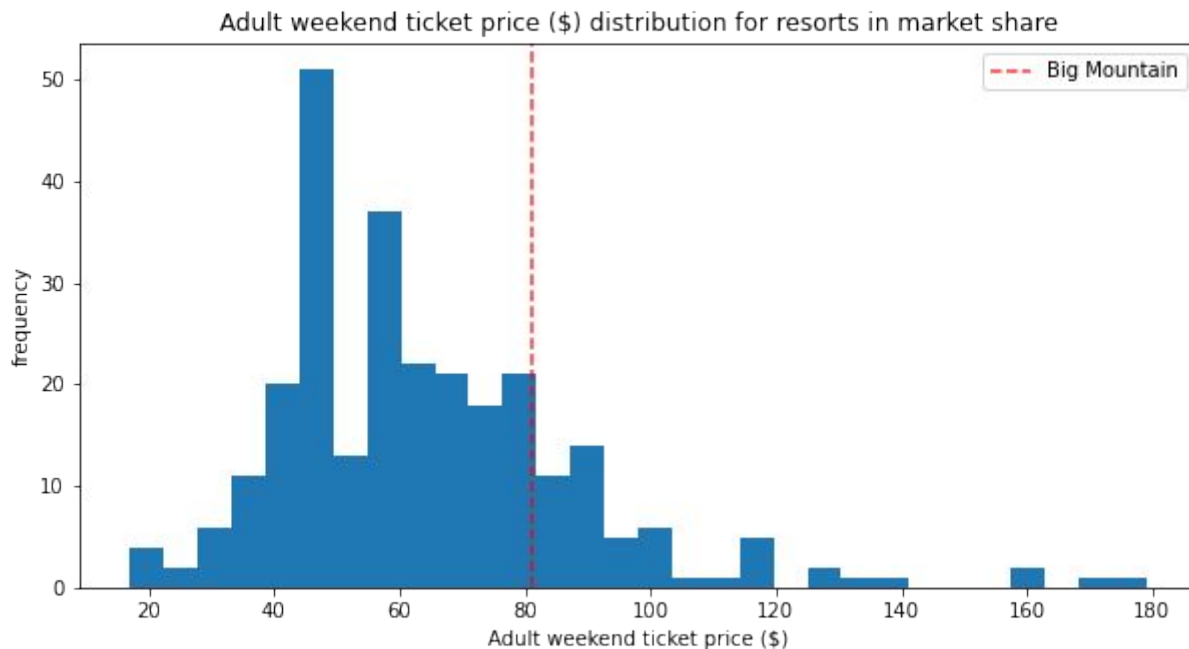


# Current Status of Vertical drop compared to other states





# Current Status of Adult ticket prices compared to other states





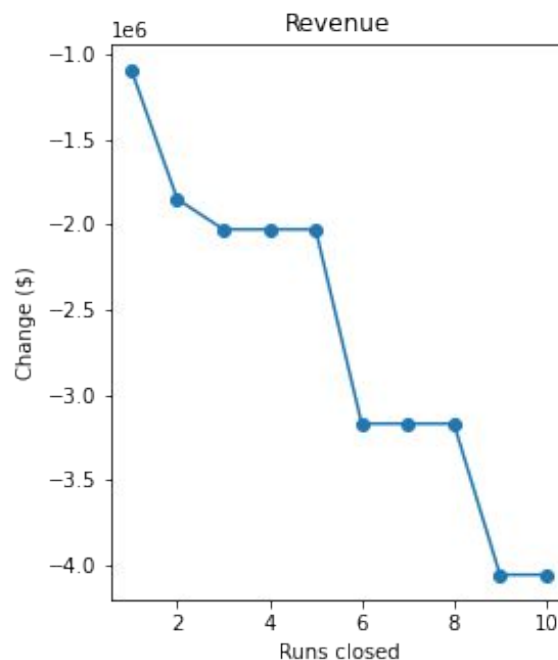
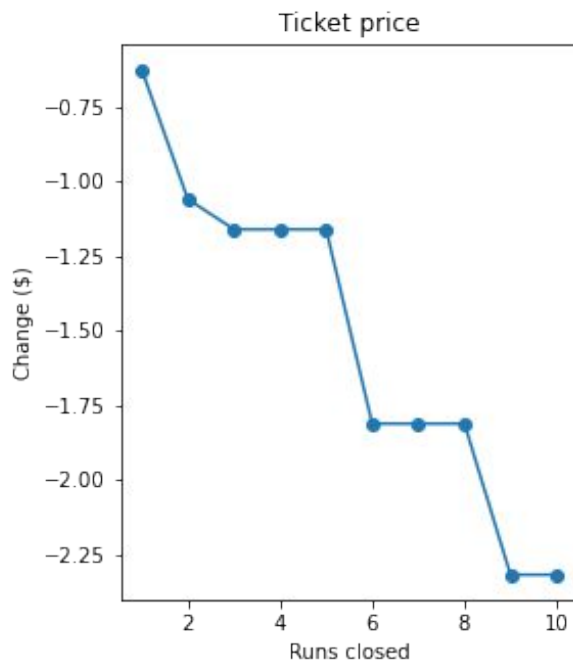


# Modeling scenarios and Impact

- The model was used to test various feature modification scenarios
- Closing runs will reduce price
- Assuming each chair lift costs \$1.5 million, model suggests to close upto 5 chairs without impacting attendance.
- Increasing vertical drop will increase the support of ticket price to \$1.20 and revenue by \$2105072



# Ticket price and revenue drop if the number of runs is reduced



# Recommendations Summary

- Big Mountain compares favorably in terms of features with other resorts.
- Recommended adult ticket price should be **\$95**.
- Even if we consider a mean absolute error of \$10, the min ticket price can be increased to \$85.
- Combining all the recommendations, the suggested ticket price should be between \$86 and \$96.

