Big Mountain Ski Resort

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Problem Identification

What is the best pricing for tickets with the newly installed chair lift. Guidance is needed to come up for new prices and upcoming investments.

Is Big Mountain capitalizing on its features?

The project involves a ticket pricing model that predicts a suggested ticketing price based on the resort's current variables.

I will Provide insight into what facilities matter most to visitors and which facilities they are most likely to pay for.
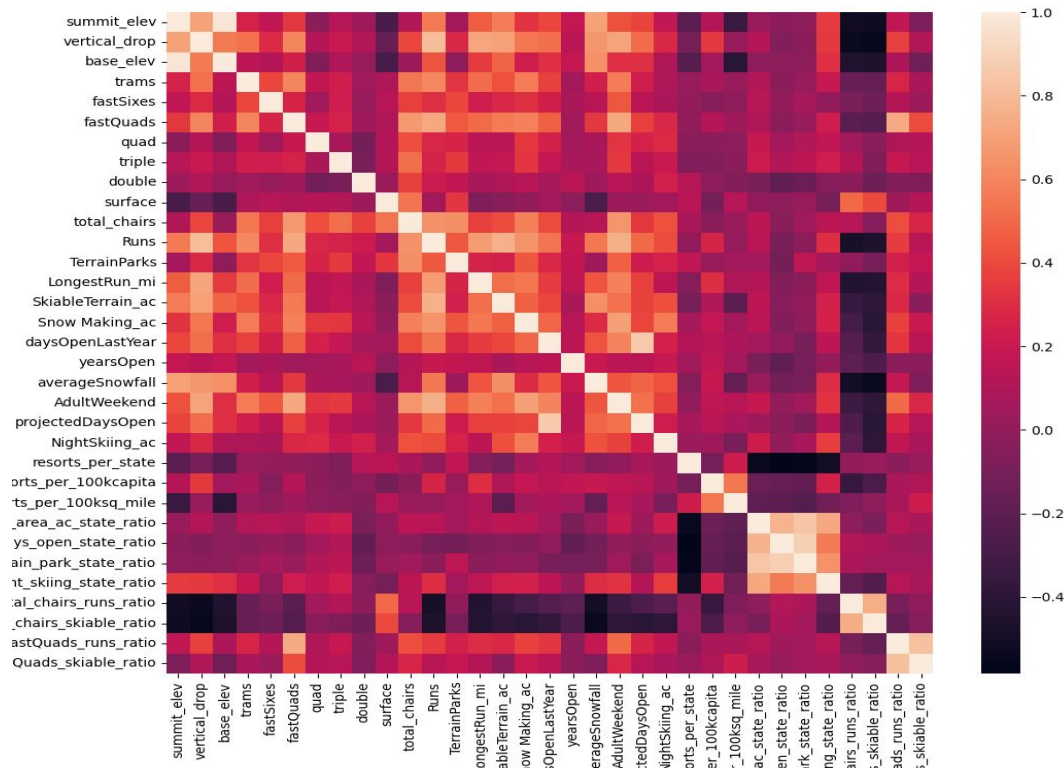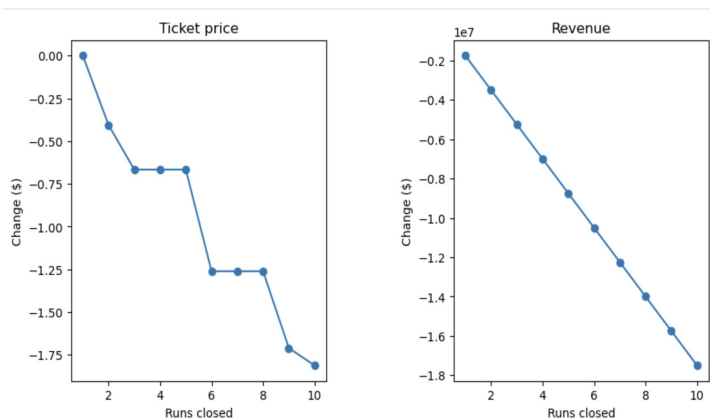
An interesting visual to look at on how each feature correlates with one another.

Problem Identification

Recommendation and Key Findings

By increasing the vertical drop either with or without snowmaking will provide the opportunity to increase revenues by $15–$18 million, however the increase cost of tickets must be considered.

Figure A

Other possible recommendations with further discussion:

1. Closure of least used lifts
   a. More than 5 lift closures will lead to a significant drop in revenue (Figure A)

2. Increase the longest run by 0.2 miles (boasting the longest run) and additional snow making of 4 acres

   Ticket Price Change = None

3. Addition of 2 acres of snow making

   Slight increase in revenue and ticketing price
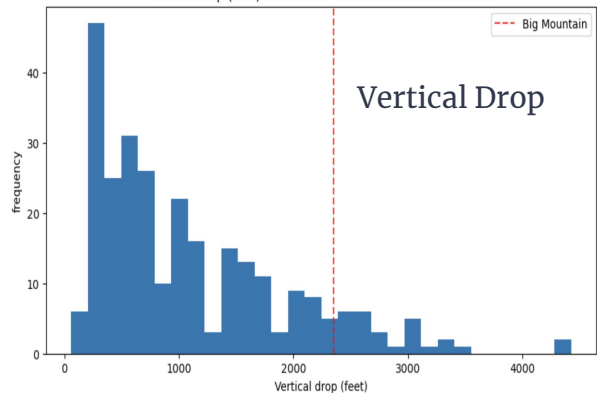
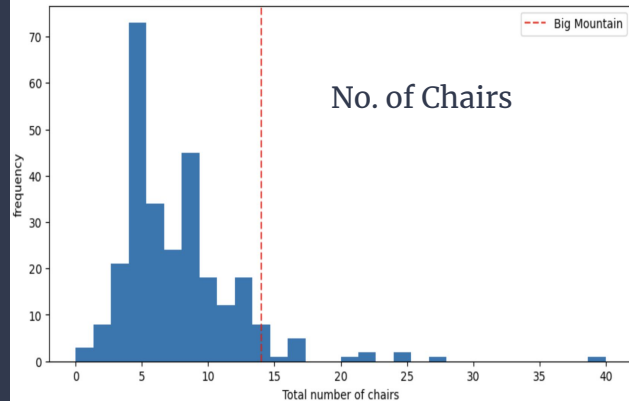# Analyzing Ticket Prices Comparisons
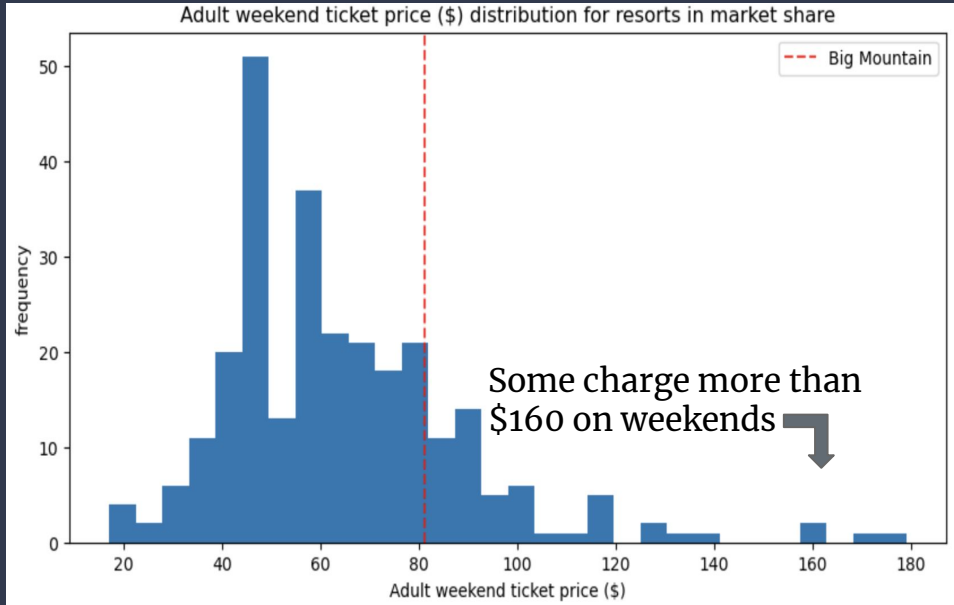
Market Comparison
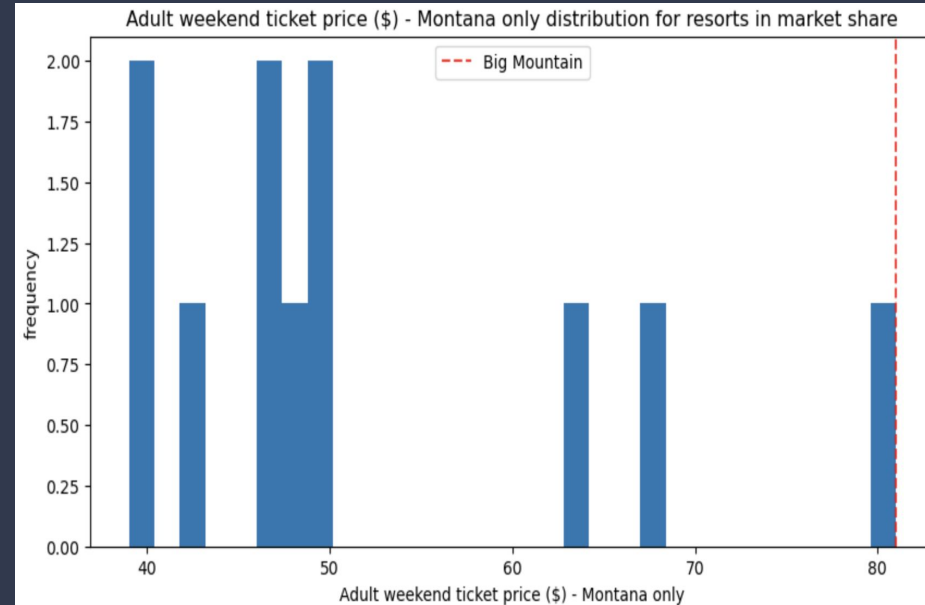
Highest Price in Montana
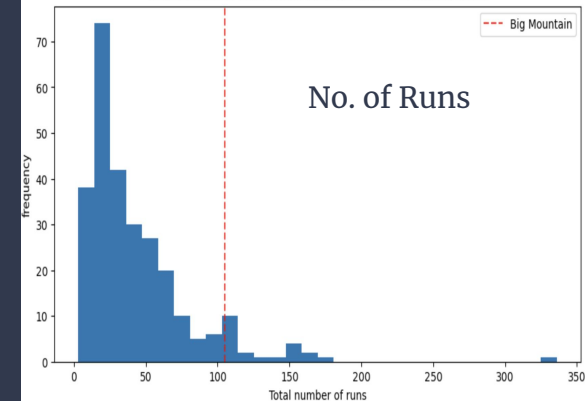
Analysis on Features

Vertical drop (feet) distribution for resorts in market share — **Vertical Drop**
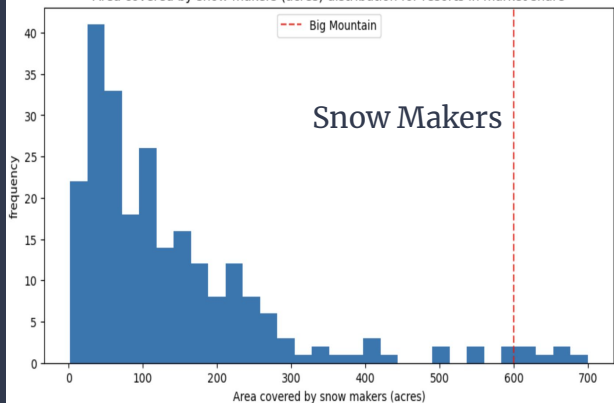
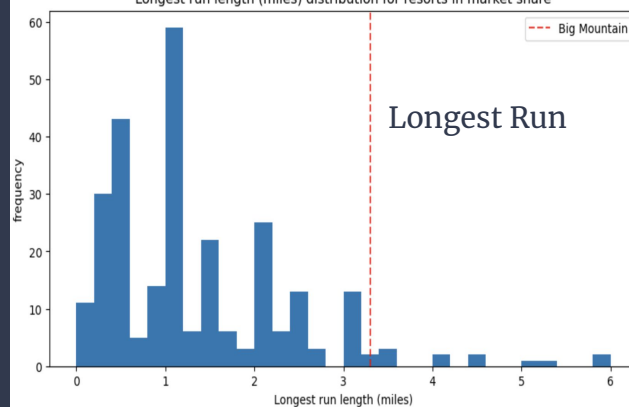Total number of chairs distribution for resorts in market share — **No. of Chairs**

Total number of runs distribution for resorts in market share — **No. of Runs**
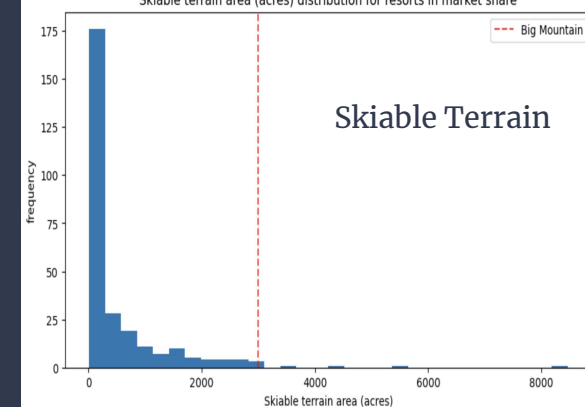
Area covered by snow makers (acres) distribution for resorts in market share — **Snow Makers**

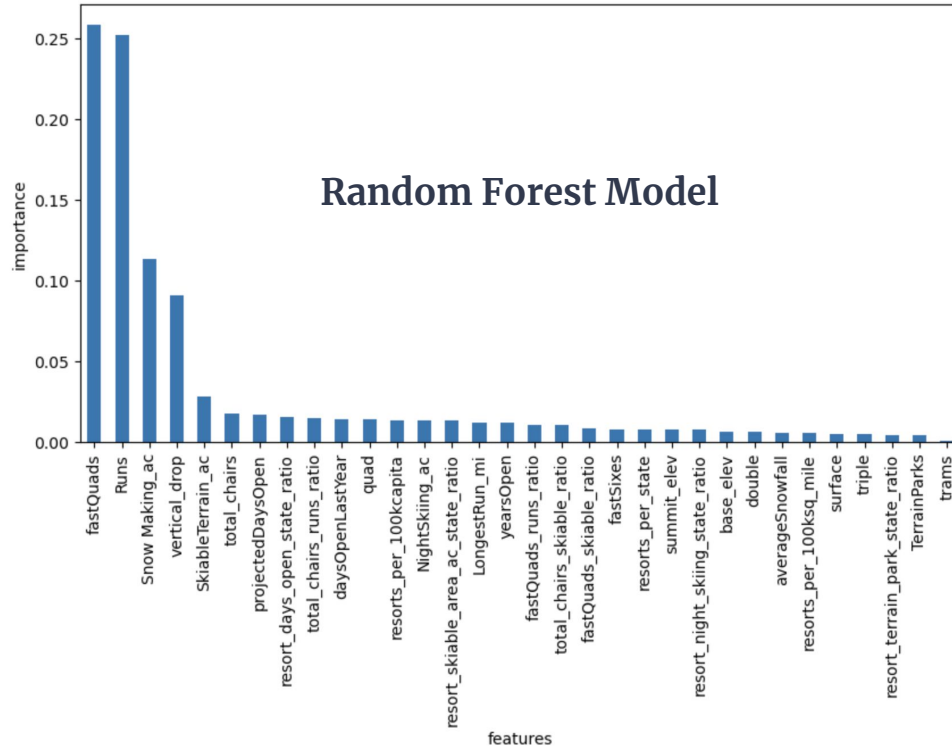Longest run length (miles) distribution for resorts in market share — **Longest Run**

Skiable terrain area (acres) distribution for resorts in market share — **Skiable Terrain**

Model Comparisons

Best random forest regressor feature importances

Random Forest Model

features

VS

Linear Model

vertical_drop	10.767857
Snow Making_ac	6.290074
total_chairs	5.794156
fastQuads	5.745626
Runs	5.370555
LongestRun_mi	0.181814
trams	−4.142024
SkiableTerrain_ac	−5.249780
dtype: float64	

Cross-validation score as training set size increases

Is more data needed? = No
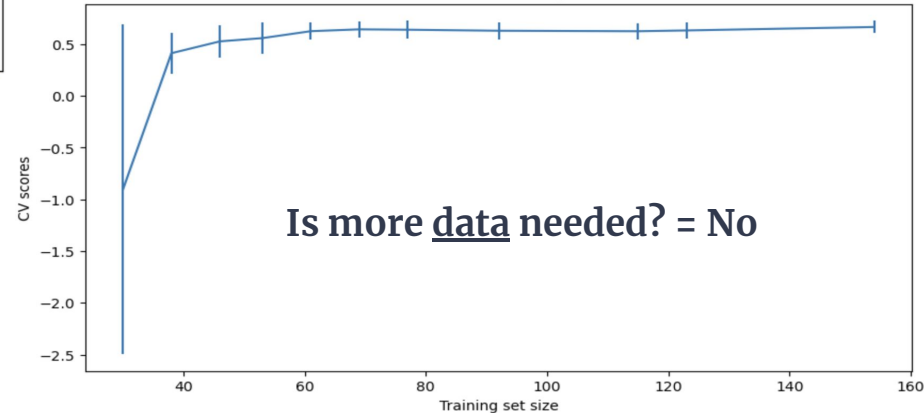
Modeling Results

After modelling the data, the modelled price came out as $95.87 vs. the actual price $81.00

- Findings about Pricing
    - Big Mountain Resort is charging less than what the prediction suggests

Questions for Discussion
- Is Big Mountain's pricing strategy not efficient? Is the resort undercharging?
- Are other resorts overpriced?
- Should more data be considered for further analysis
    - Initial installment costs
    - Operating Costs of new lift, legal costs

Recap

Big Mountain Resort has features that rank amongst the top market share:

- Number of Chairs
- Snow Making machines/capacity/capability
- Number of Runs
- Skiable Terrain
- Longest Run

- Propositions by Importance
  - Scenario 1 – Increase vertical drop with and without snowmaking
    - By increasing the vertical drop either with or without snowmaking will provide the opportunity to increase revenues by $15-$18 million, however the increase cost of tickets must be considered.
  - Scenario 2 – Increase longest run with snowmaking
  - Scenario 3 – Closure of 4-5 least used runs
    - Further closures will significantly decrease revenue