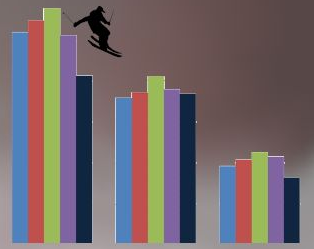
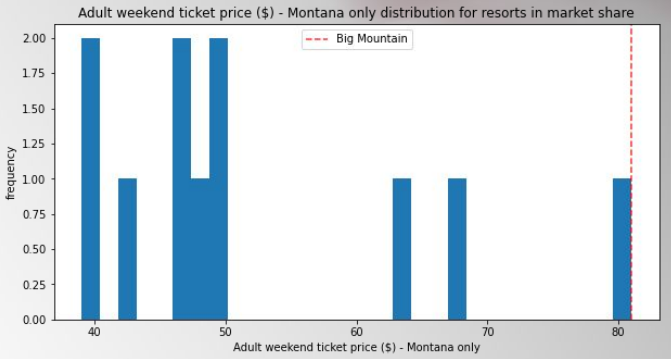


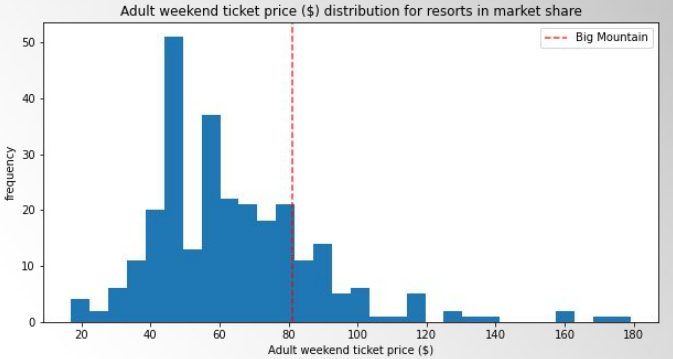
Big Mountain Resort

Ticket Price

Problem

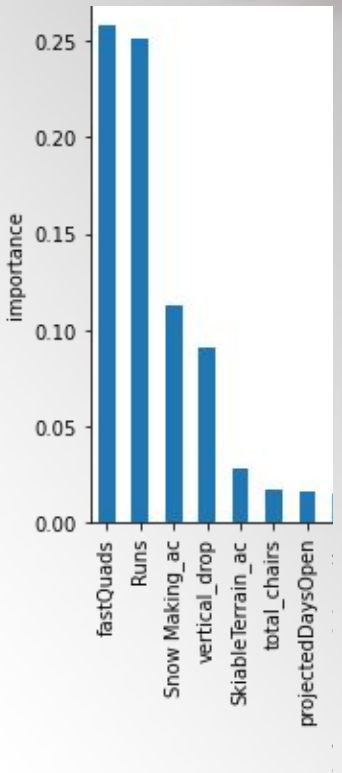
- A new chair lift increased operating costs by $1,540,000.
- The ticket price for the resort is below the market demand.
- The ticket prices is the highest in the state.



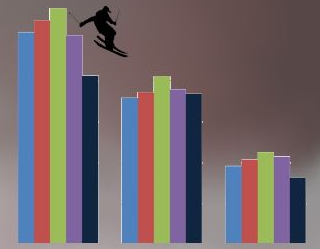


Recommendation and key findings

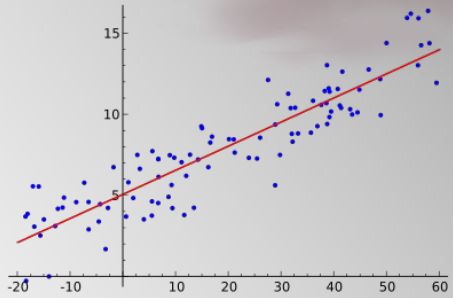
- Prices vary primarily by 4 main features:
  - Number of fast quads
  - Number of total runs
  - Acres of snow making
  - Vertical Drop
- The recommended price for Big Mountain Resort is $85.00 (based off of the current prices in Montana and a estimated value range of $85.48 to $106.26)



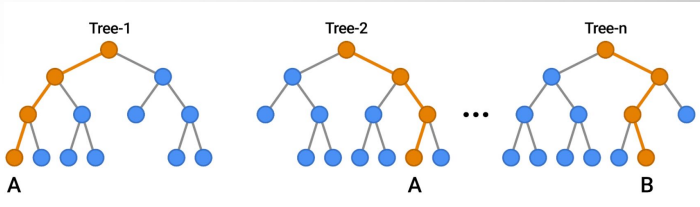
Modeling results and analysis



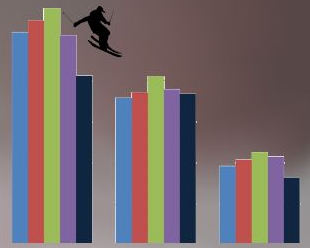
- Linear Regression
  - Has dependence on 8 features.
  - Had an overall training **mean absolute error of ~11.79.**



- Random Forest Model
  - Has dependence on 4 features
  - Had overall training **mean absolute error of ~9.54.**



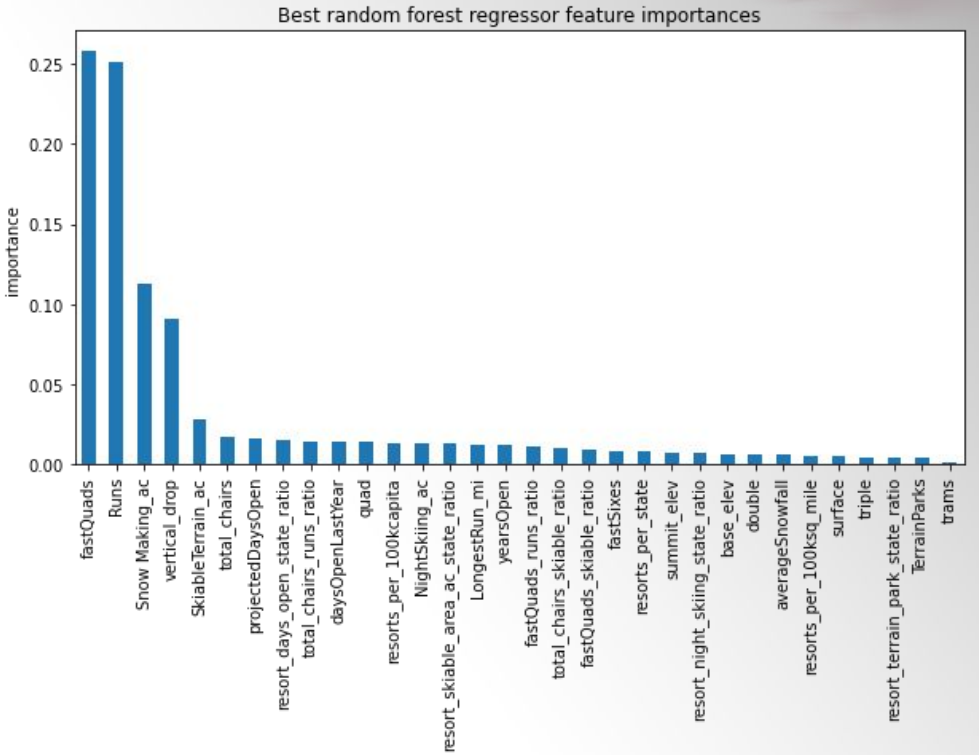
Modeling results and analysis Cont.



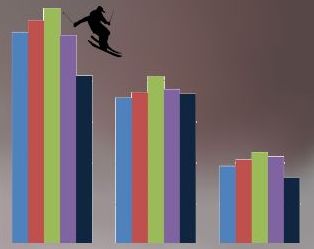
- Linear Regression Model dependent Features (slope)
  - Vertical drop: 10.767857
  - Snow Making ac: 6.290074
  - Total chairs: 5.794156
  - Fast Quads: 5.745626
  - Runs: 5.370555
  - Longest Run mi: 0.181814
  - trams: -4.142024
  - Skiable Terrain ac: -5.249780 (Doesn’t make intuitive sense, may actually be dependent on number of guests or other hidden factor)

Modeling results and analysis Cont. Cont.

- Random Forest
  - Fast Quads
  - Runs
  - Snow Making Area
  - Vertical Drop



Conclusion



- Random Forest model gives a price range of $85.48 and $106.26.
- Based off of Montana prices recommend not increasing the price too much.
- To offset the cost of the new chair lift, the price needs to increase by only $0.88.
- Recommend changing the price to $85.00.