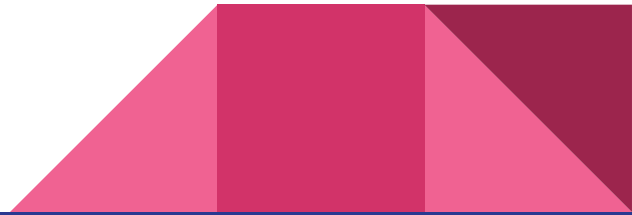
Ticket Price Market Analysis

Big Mountain Resort ticket price modeling with machine learning

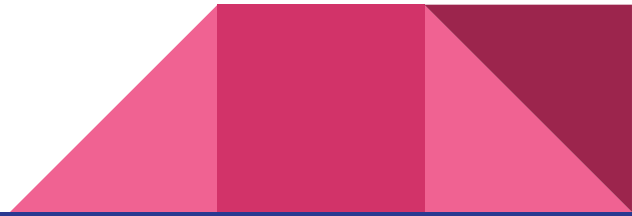
Problem Identification

Big Mountain Resort has added a new chair lift, costing $1,5 million per year. How can competitor data inform a model for ticket prices, such that the resort may raise ticket prices, update key resort facilities, or a combination of the two, to counteract the cost of the new chair lift and, ideally, increase profits even further?



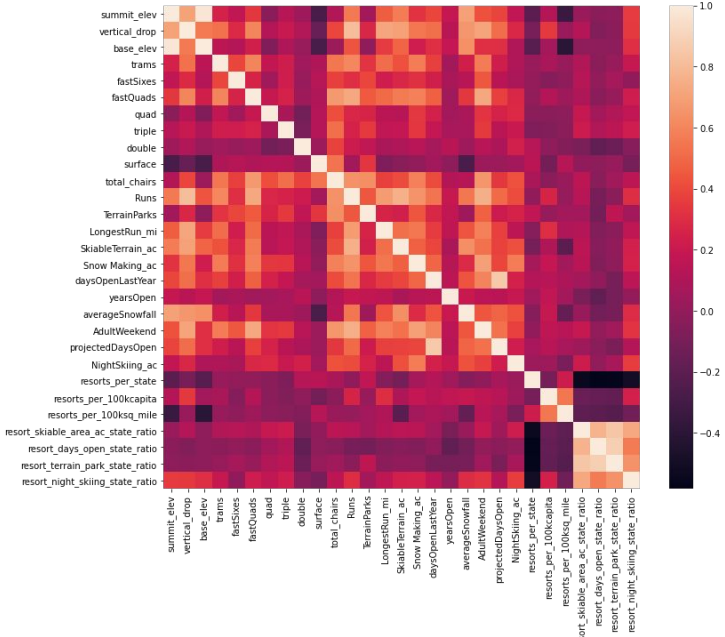
Key Findings

- Big Mountain could raise ticket prices from $81 to as high as $95
  - Resort ranks highly in a number of important areas like total number of runs and lifts, vertical drop, and snowmaking area
  - Model shows that skiers will pay a premium for these and other key features
- Increasing vertical drop could justify a further ticket price increase of $2
- Eliminating runs reduces costs, but also decreases projected ticket prices in the model; we recommend cutting very few if any



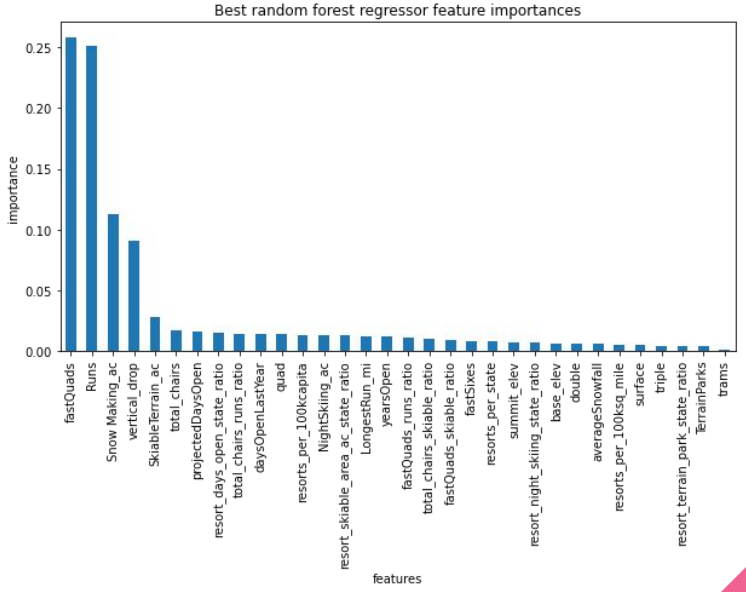
What drives ticket cost?

Adult weekend ticket price is associated positively with vertical drop, fast quads, runs, snowmaking area, and other features to lesser degrees:



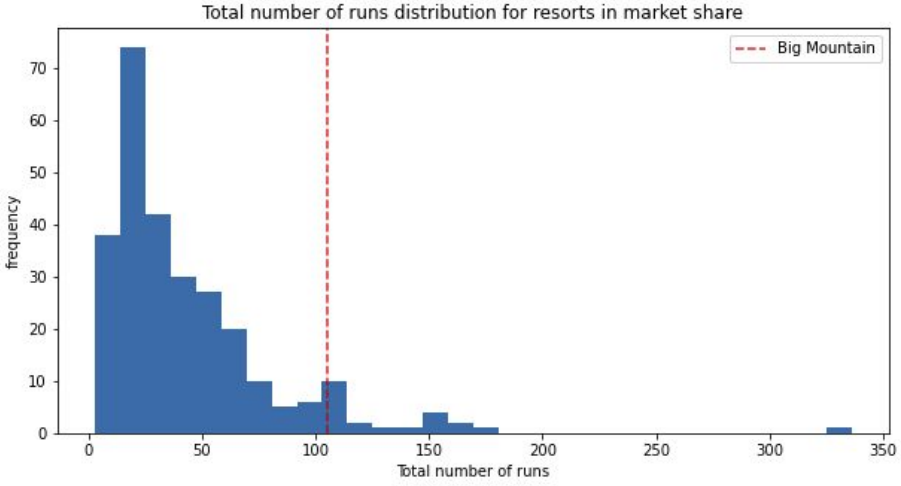
Importance of features in our model

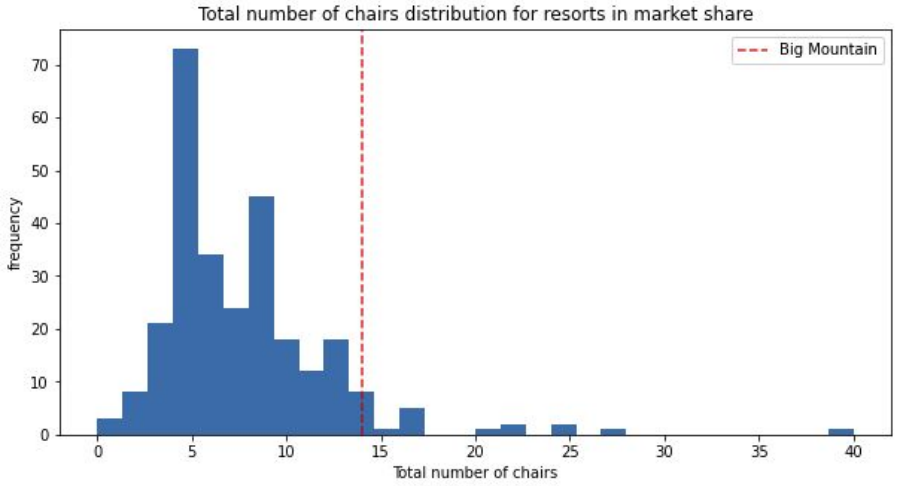
Our machine learning algorithm, chosen as the most predictive from among several candidate models, placed relative importance on each feature accordingly:



Big Mountain is... big!

The resort ranks among the highest in the country in some of the most influential model features:





Skiers will pay more

- Our model, informed by market data from across the country, supported a ticket price of **$95.87**
- Increasing vertical drop by 150ft could increase ticket prices by a further **$1.99**
- Lengthening the longest run **does not** support price increase
- Eliminating ten runs would reduce cost, but also drop ticket prices; use sparingly