

Problem Identification

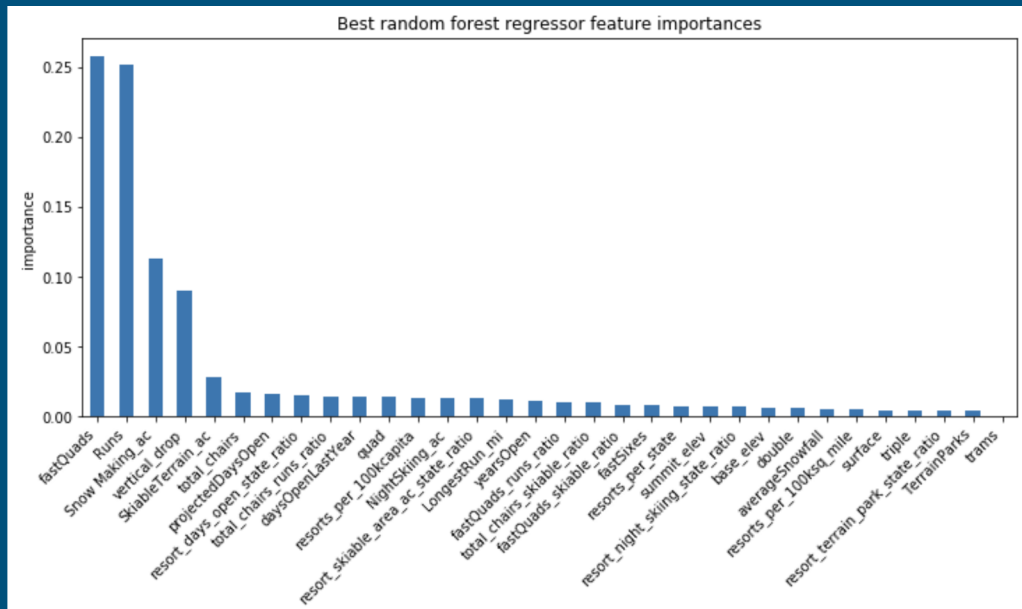
- Build a prediction model for ticket price to cover the increased operating cost of \$1,540,000
- Provide guidance on future facility investment plans
- Possible constraints: limited amount of facilities and properties

Recommendation & Key Findings

- Current ticket price: \$81.00; modeled ticket price: \$95.87
- Recommendation 1: Increase vertical drop by 150 feet, add a run, install an additional chair lift.
- Recommendation 2: Close some of the least used runs. Model suggested closing either 1, 2 or 5 runs.

Modeling Results

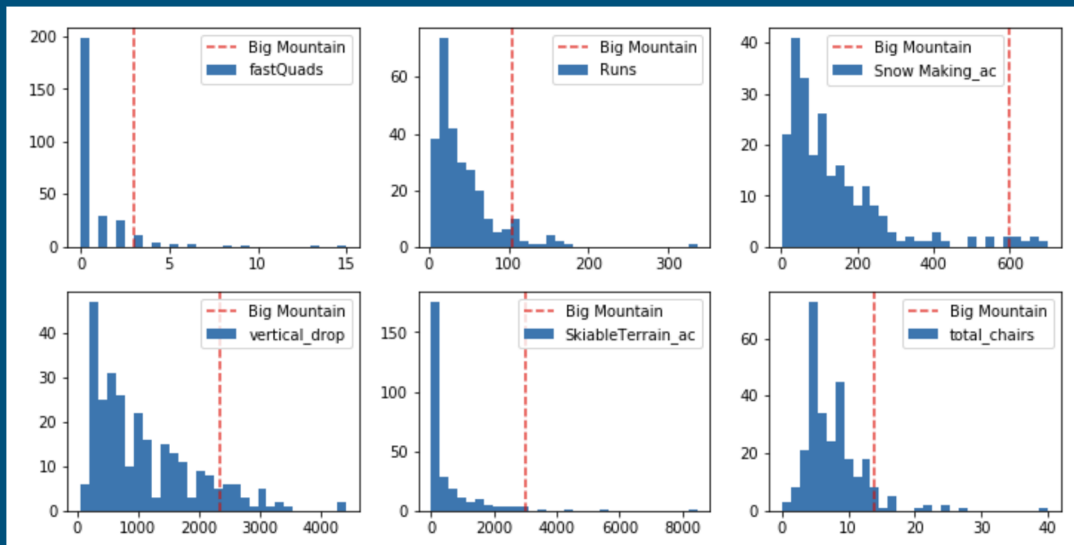
- The most important features in random forest regressor



- fastQuads
- Runs
- Snow Making_ac
- vertical_drop
- SkiableTerrain_ac
- total_chair
-

Modeling Results

- Distribution of the value of the most important features for all resorts in Big Mountain's market share

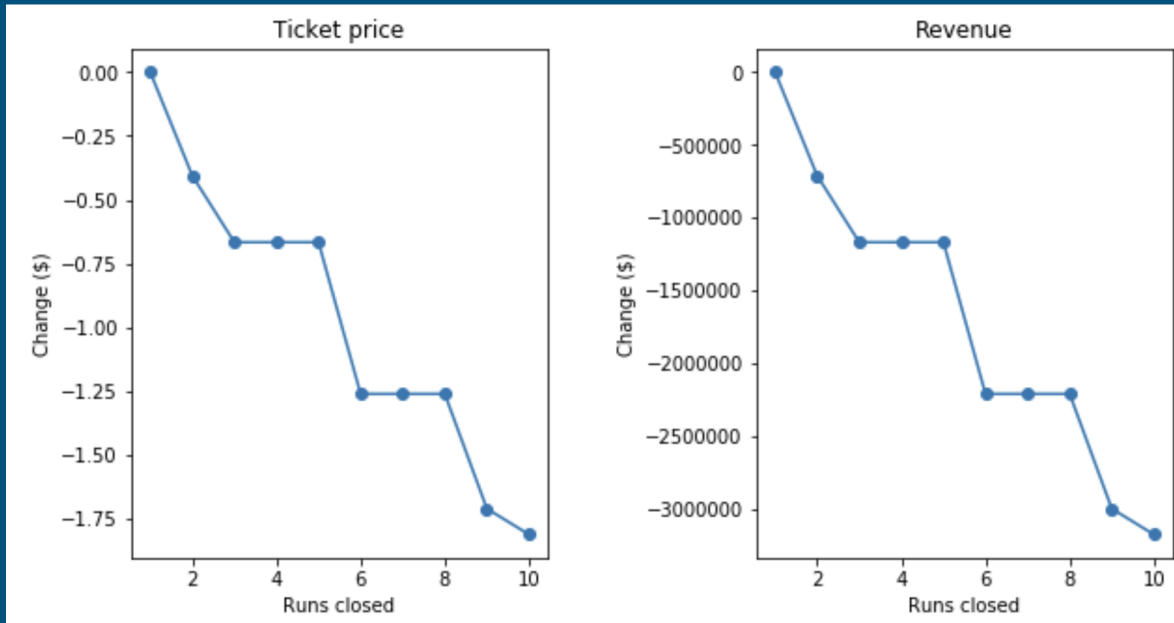


Modeling Results - Scenario 1

- Increase the vertical drop by 150 feet, add a run, and install an additional chair lift
- Model shows the ticket price can be increased by \$1.99, the total revenue can be increased by \$3,474,638

Modeling Results - Scenario 2

- Close down some of the least used runs



- The operating cost of one run is unknown
- Closing down one run reduces operating cost, while maintaining revenue
- Depending on the operating cost, the model suggests closing down either 2 or 5 runs

Summary

- Model suggests increasing ticket price to \$95.87
- Option 1: increase vertical drop by 150 feet, add one run and install another chair lift, increase ticket price by \$1.99
- Option 2: close one of the least used runs, keep the same ticket price
- Option 3: close either 2 or 5 runs depending on the operating cost, reduce ticket price accordingly