Guided Capstone Project: Big Mountain Resort

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Problem Identification

- Big Mountain resort charges $81 per Adult ski ticket
  - Higher than competitors
- May not maximize revenue relative to position in the market
- Does not have strong sense of important facilities
- Big Mountain added a ski lift which will increase operating costs
  - $1,540,000 ↑
- Goal: Develop a data-driven business strategy for selecting a better value for ticket price to maintain revenue that will at least offset new lift operation costs for next year.

Recommendations and key findings

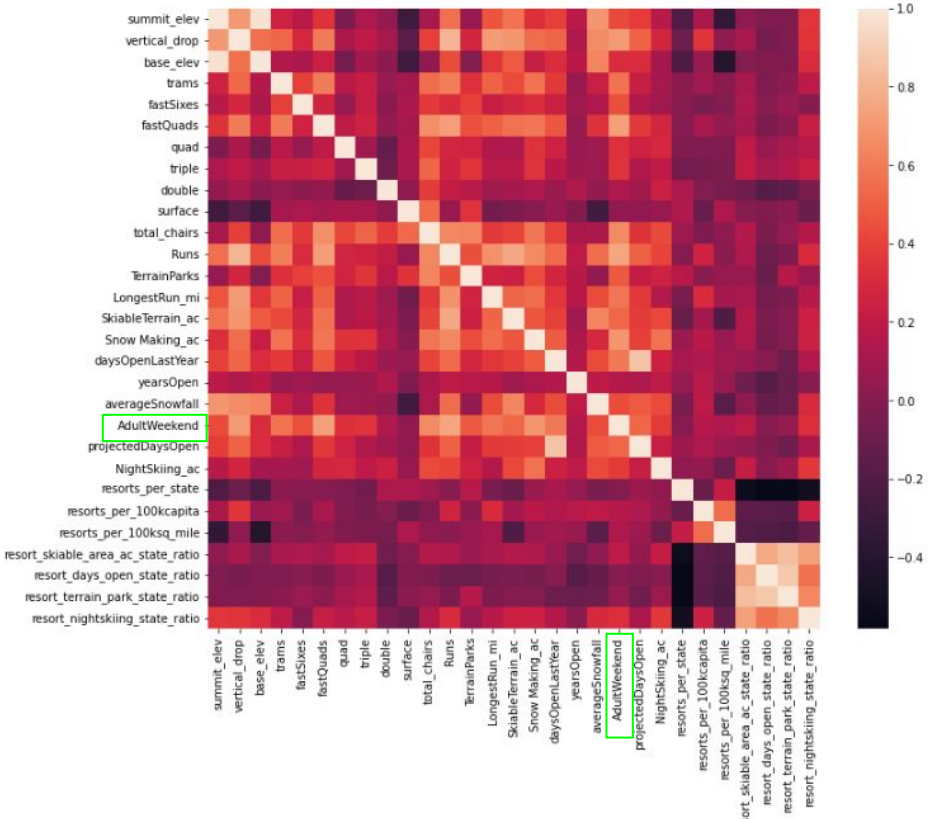
- Big Mountain's best features:
  - Number of fast quad lifts
  - Number of runs
- Additional ski lift = increased ticket value (+$1.99 each)
- New ticket price: $82.99
  - Expected ticket revenue: $3, 474, 638
- Close least used run

Model choice and project goals

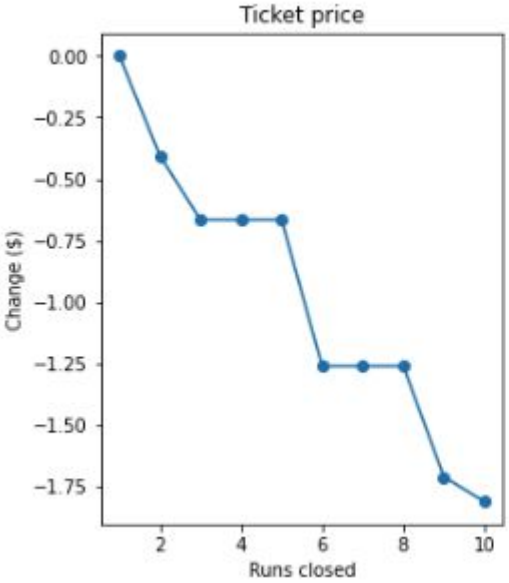
- Random Forest Tree model
  - Target variable: Adult Weekend (ticket price)
- Identify key features that provide value to ticket price
- Four scenarios
  - Scenario 1: Close up to 10 ski lifts
  - Scenario 2: Add 1 run, 150 ft vertically, 1 chair lift
  - Scenario 3: Add 2 acres of snowmaking + Scenario 2
  - Scenario 4: Increase longest run by 0.2 miles and add 4 acres of snow making.

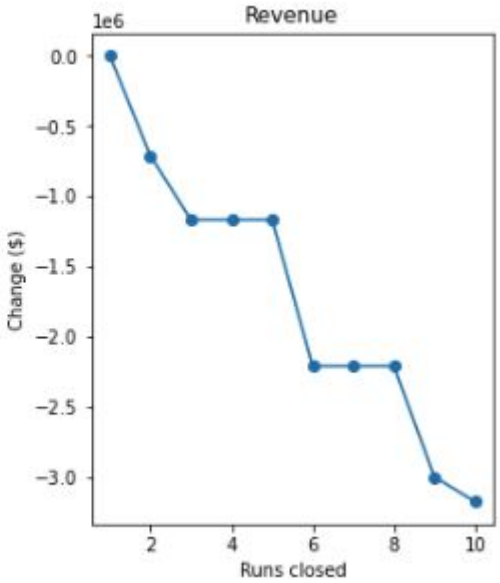
Big Mountain's best features

- Adult weekend
- Lighter colors = more correlation
  - Vertical drop
  - Total fast quad lifts
  - Total chairs
  - Runs
  - Snow making



Projected ticket price and revenue for closing runs

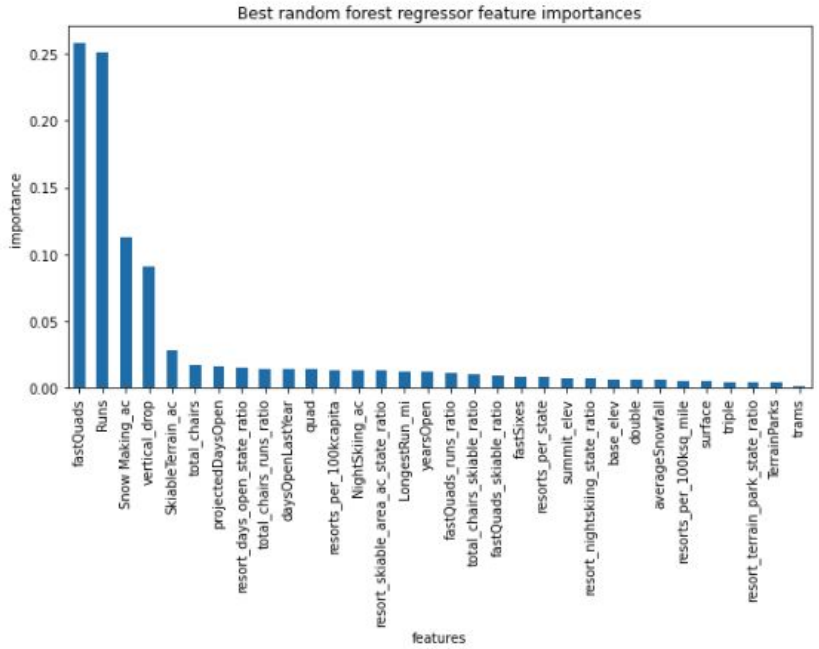




- Scenario 1
- There is **no effect** on ticket price when closing 1 run
- Closing 2 or more **drops** ticket price and therefore revenue.

Additional ski lift increases ticket prices and revenue

- Scenario 2: Additional ski lift increases best features
  - Ticket prices should increase $1.99
  - Total projected ticket revenue: $3, 474, 638
- No benefits of adding more acres of snowmaking (Scenario 3 and 4)



Summary and Conclusion

- Additional ski lift
  - New lift operation costs: $1,540,000
  - Expected revenue - new lift operation costs = ~$2,000,000
- Top feature not modeled: Number of fast quad lifts
- Limitations
  - Does not consider other resort operation expenses and revenue
- Model is publicly available for future use