Data-Driven Approach to Setting Ticket Price for Big Mountain Resort

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SPRINGBOARD CAPSTONE PROJECT 1

Problem Identification

Problem

Big Mountain currently charges a premium above the average price of resorts in its market segment

Solution

- Implement a data-driven strategy that capitalizes on Big Mountain Resort's facilities
- provide guidance on how to select a better value for its ticket price

key findings and Recommendation

Key Findings

- Big Mountain outperforms most ski resorts in the U.S. In these facilities that visitors value most:
  - Vertical drop
  - Number of runs
  - Total chairs
  - Snow making area
  - Number of fast quads
  - Distance of the longest run
  - Number of trams
  - Skiable terrain area

Recommendation

Increase adult weekend to **$97.86**

✚

Increase vertical drop by 150 ft

✚

Add 1 run

✚

Install 1 chair lift

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**Increase profits by $ 2 M**

Modeling

Details of the dataset

▶ Dataset containing information from 277 resorts in the U.S. that can be considered part of the same market share as Big Mountain

▶ Columns include information on:

    ▶ Adult weekend and weekday prices

    ▶ Vertical drop

    ▶ elevation of ski resort

    ▶ number of chairlifts, trams, fastquads

    ▶ total skiable area and snowmaking area

    ▶ days the resort was open and projected days open
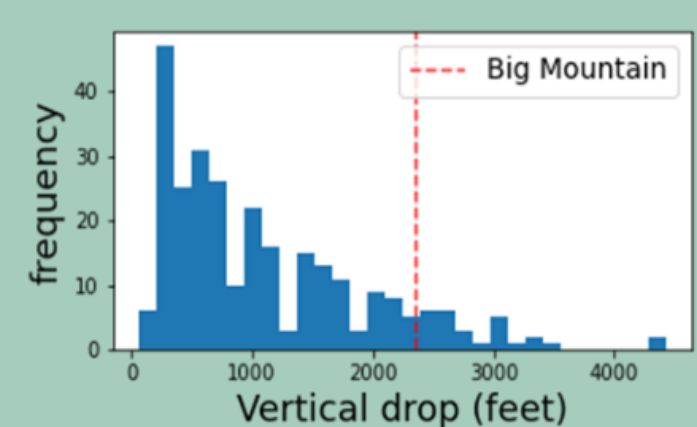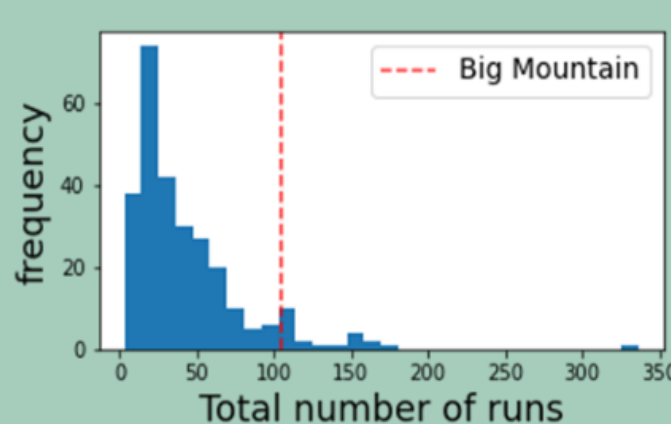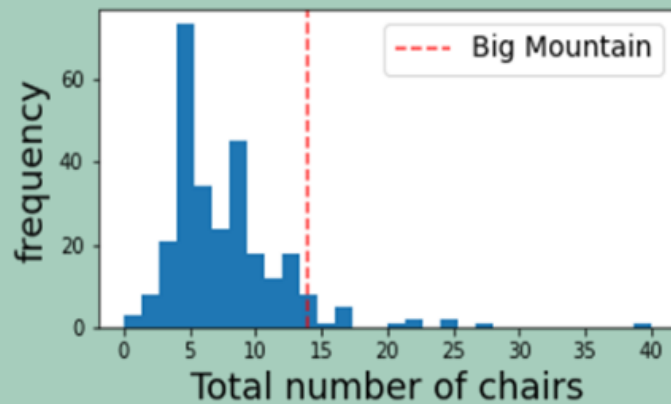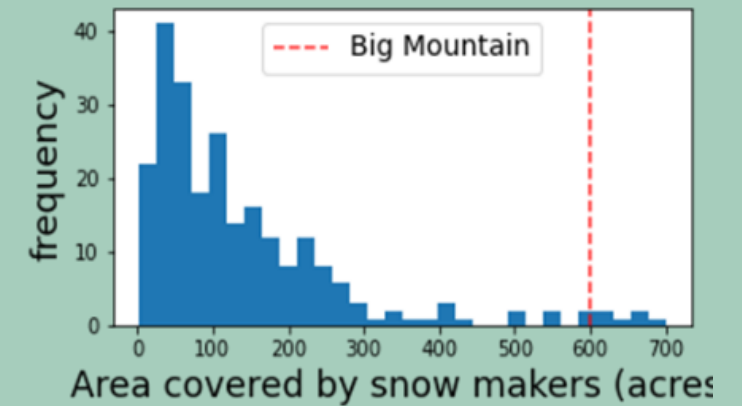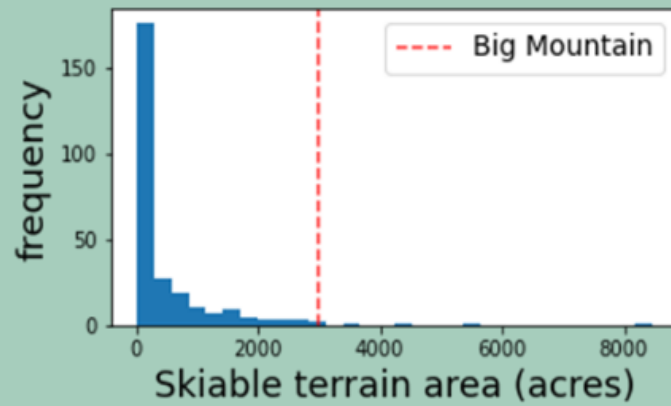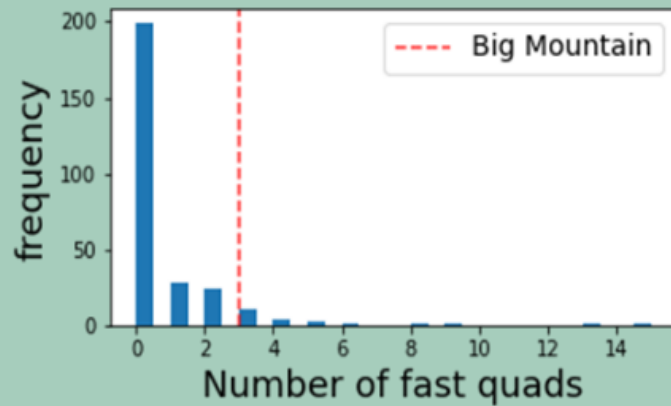
Models

▶ The performance of the following models were evaluated

    ▶ Linear Model

    ▶ **Random Forest Model**

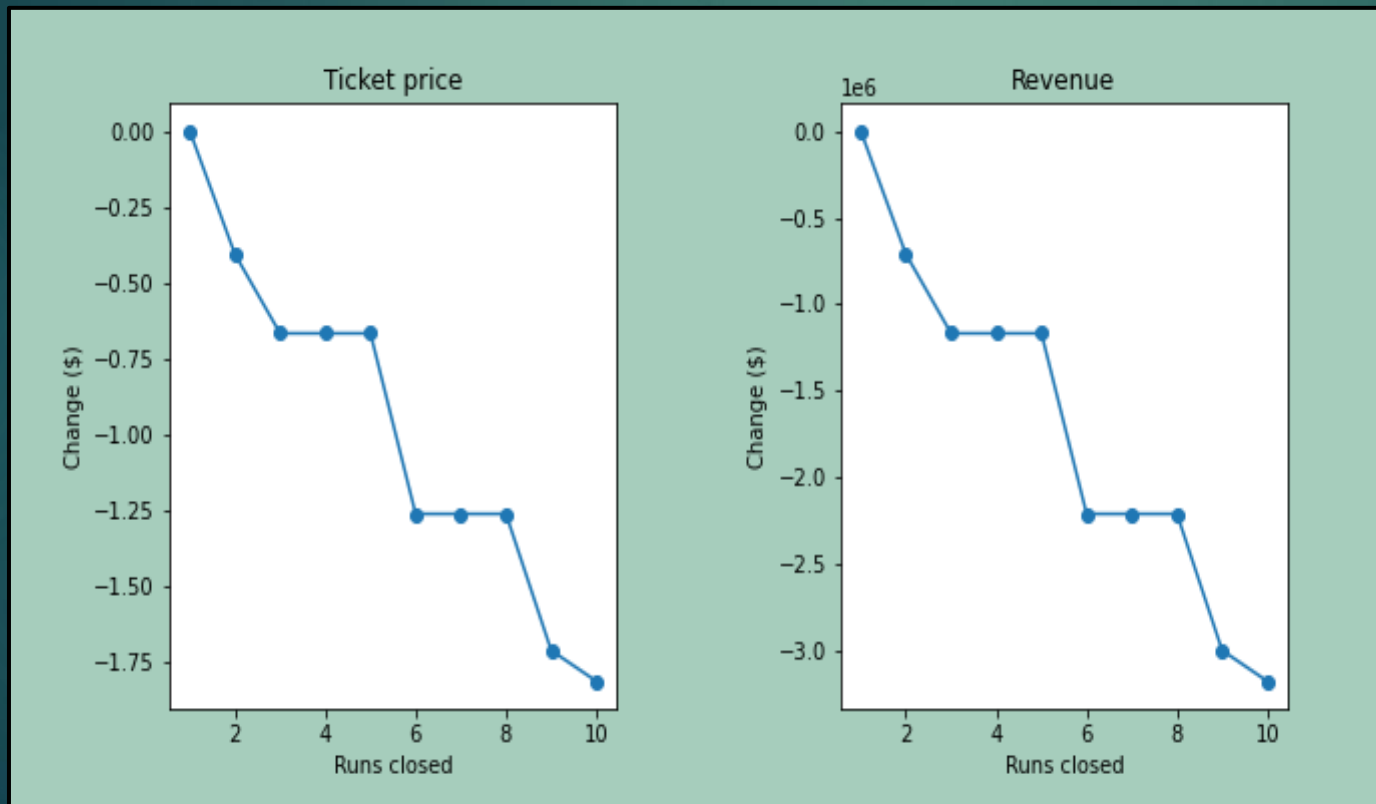# Models revealed the facilities that visitors value the most
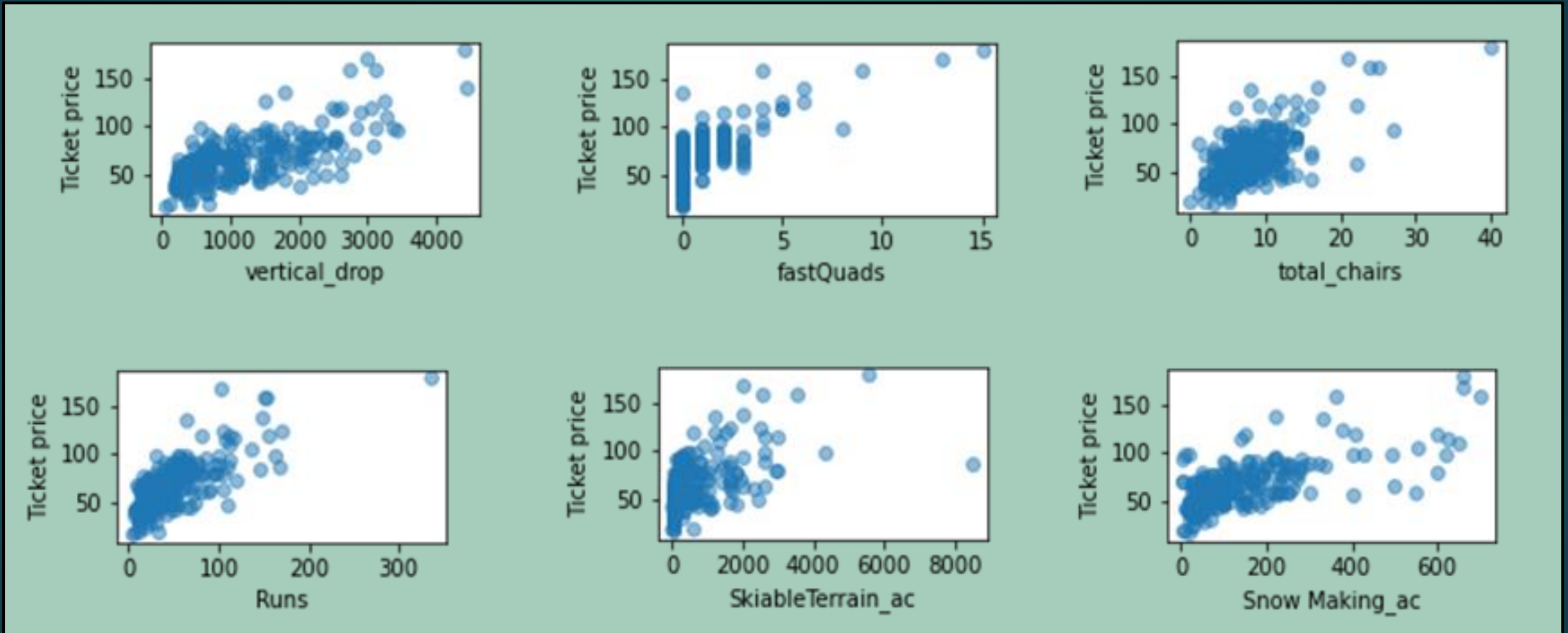
Big Mountain Resort outperforms most U.S. resorts in facilities visitors value the most

Analysis – Using the random forest model for different case scenarios

Scenario 1: closing up to 10 runs

To cut expenses:
- Up to 1 run can be closed and the ticket price would stay the same and make no difference on the revenue
- Closing 3 to 10 runs could decrease revenue by $ 0.5-3.5 M

Analysis – Using the random forest model for different case scenarios

Scenario 2

- Increase vertical drop by 150 ft
- Install an additional chair lift
- Add a run

Increase price to $97.86 Increase profits by $2 M

Scenario 3

- Same as scenario 2
- Add 2 acres of snow

Increase price to $97.86 Increase profits by $2 M

Scenario 4

- Increase the longest run by 0.2 miles
- Add 4 acres of snow making

Makes no difference in revenue

Summary and Conclusions

▶ Currently, Big Mountain Resort charges $81.00 for the adult weekend ticket price

▶ The model suggests that the resort should be charging $95.87, with a margin of $10.39

▶ Big Mountain Resort outperforms most U.S. resorts in the facilities that visitors value the most, including vertical drop, number of chairs, and number of runs

▶ If the resort wants to cut down on costs, up to 1 run can be closed with no effect on revenue

▶ Ticket price can be increased by $1.99 and profits can be increased by $ 2 M if the vertical drop is increased by 150 ft, 1 additional chair lift is installed, and 1 run is added

▶ The model can be improved with additional data such as number of visitors and operating costs