Big Mountain Resort pricing

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- **What possibilities exist for Big Mountain Resort to increase company's revenue in the year 2020 by implementing a new data-driven business strategy?**

- **Current premium ticket price of $81 set above a simple average of resorts in the same market segment.**

- **Implement a new business strategy that fully exploits existing market data,**
- **Increase company's revenue either by raising the ticket price or cutting operating costs.**

Market data: a sample with information about ~280 resorts in the same market segment,
32 features characterizing each of the resorts.

Data-driven model:

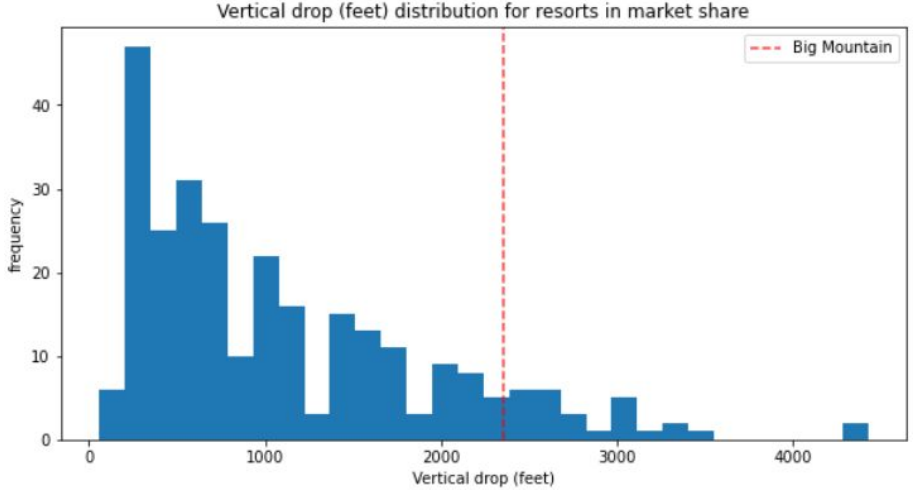
- based on machine-learning approach,
- used to find the price's dependence on resort's 32 features,
- optimized and tested using verified data-science methods,

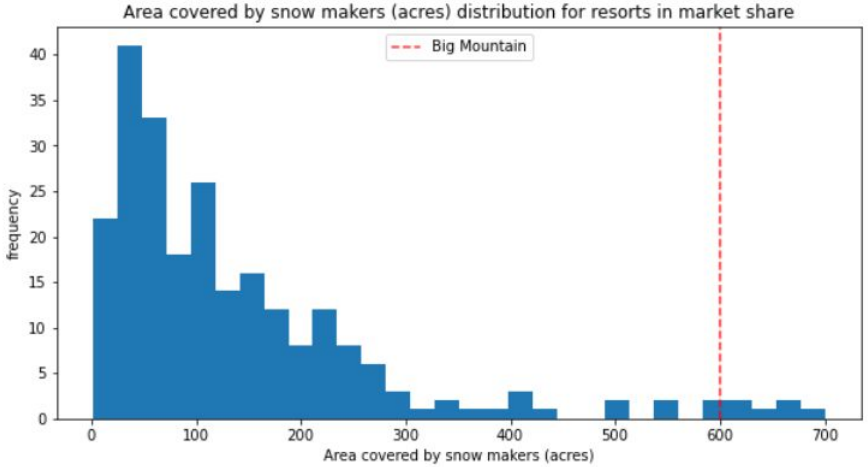
- predicts that only 8 out of 32 features significantly influence the ticket price:
  vertical drop, skiable area, area covered by snow makers, number of runs,
  resort's longest run, number of chairs, fast quads and trams.

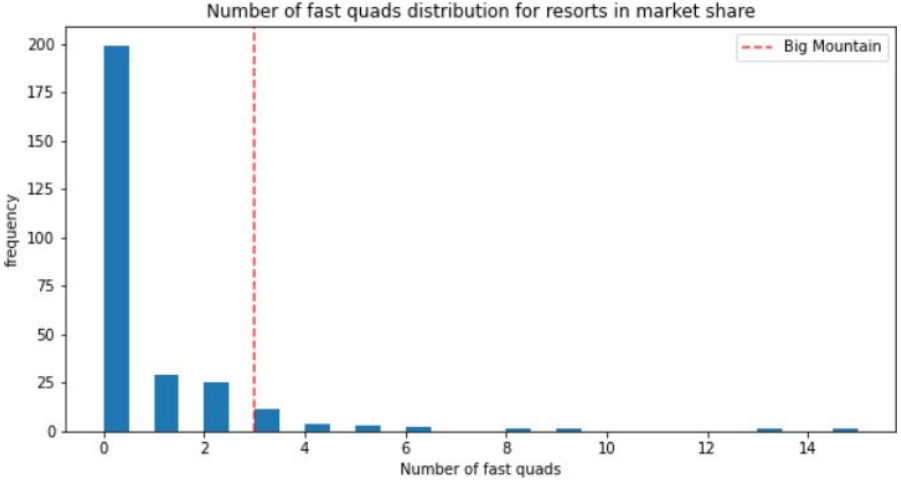
Big Mountain price prediction:

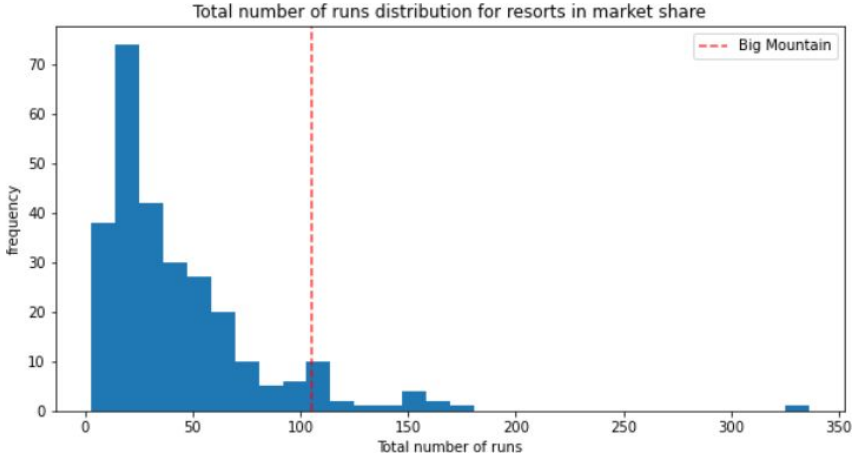
- The ticket price could be increased from $81 to $95.87,
- The increase by $14.87 justified by very favorable parameters of this resort compared to others,
- Big Mountain vs US - among those with the largest vertical drop, the largest skiable area and area covered by snow makers, the highest number of runs including the longest runs, the highest number of chairs and fast quads.
- Big Mountain vs 10 competitors in Montana - performs remarkably better in terms of skiable area and area covered by snow makers, the longest run and total numbers of chairs and fast quads.

Big Mountain vs US









Possible alternatives for revenue increase:

scenario 1: permanently close down up to 10 of the least used runs,

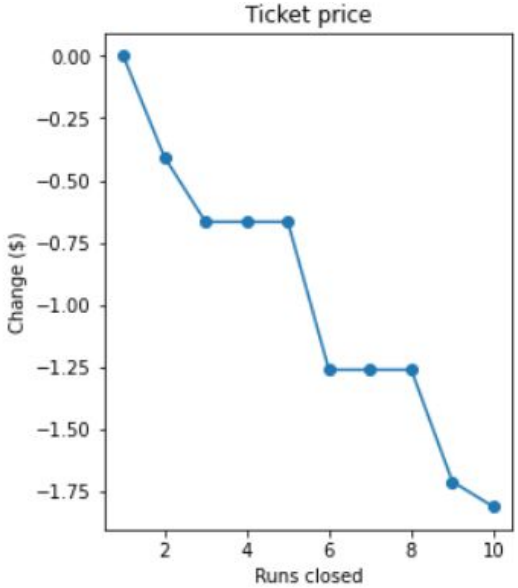
scenario 2: increase the vertical drop by 150 feet and require the installation of an additional chair lift,

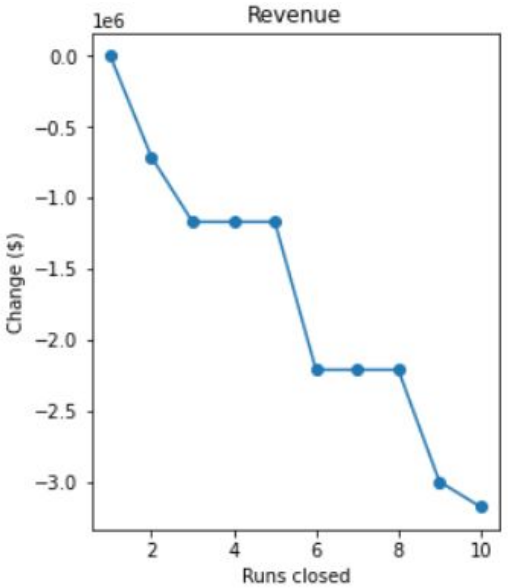
scenario 3: same as **2**, but add 2 acres of snow making cover,

scenario 4: increase the longest run by 0.2 mile to boast 3.5 miles length, and require additional snow making coverage of 4 acres.

Expected number of visitors over the season is 350,000. On average, visitors ski for five days.

Scenario 1 vs model predictions:





- closing one run will not change the company's revenue
- closing 3 runs will imply the ticket price reduction of 70 cents and the revenue reduction of 1.2M dollars.
- Interestingly, closing additional two runs (5 in total) will likely have no negative impact on the profit, but may further reduce operating costs.
- closing 6-10 runs will further reduce the ticket price by 1.25 - 1.75 dollars and the revenue by $2.2-3.2M,

Scenario 2 vs model predictions:
Adding a run, increasing the vertical drop by 150 feet, and installing an additional chair lift would justify a ticket price increase by $1.99 and a revenue increase by 3.47M dollars,

Scenario 3 vs model predictions:
Extra addition of 2 acres of snow making does not justify any increase in the ticket price,

Scenario 4 vs model predictions:
Extending the longest run by 0.2 miles and adding 4 acres of snow making capability does not support the ticket price increase either,

Final recommendations:

- suggest to apply scenario 1 and scenario 2 with 5 closed runs,
- if combined, they should justify the ticket price of $97.16 and generate the revenue increase of $2.27M.