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Guided Capstone Project Report

Big Mountain is a ski resort located in Montana and we are trying to answer theses important questions about it:
Is Big Mountain Ski resort ticket underpriced? If yes how much? Can we find a more reasonable price for Big Mountain Ski resort? What are a couple of scenarios we can explore to increase the ticket price or lower the cost of operations?

If we figure out that an increase in the ticket price without loosing visitors is possible would you hesitate to take action? higher ticket price simply means higher revenue for Big Mountain Resort!

How can we come up with a reasonable ticket price in the first place?
There are a certain number of factors that affect ticket price of a ski resort. These are facilities and parameters that can be changed. Using these factors we will come up with a model that will give us an insight into what Big Mountain's ideal ticket price could be, and how ticket price might change under various scenarios.
Our studies shows that following factors(features) have the greater impact on the ski resort ticket pricing:

- vertical_drop
- Snow Making_ac
- total_chairs
- fastQuads
- Runs
- LongestRun_mi
- trams
- SkiableTerrain_ac

	vertical_drop	Snow Making_ac	total_chairs	fastQuads	Runs	LongestRun_mi	trams	SkiableTerrain_ac
124	2353	600.0	14	3	105.0	3.3	0	3000.0

FIG 1. VALUES OF EACH FEATURE OF BIG MOUNTAIN RESORT

Model input is the associated values of each of these features and the output is the recommended ticket price:
Big Mountain Resort modeled price is $95.87. In comparison with the current price ($81.00)
We can conclude that there is room for ticket price to get increased.

The business has shortlisted some options:

1. Permanently closing down up to 10 of the least used runs. This doesn't impact any other resort statistics.
2. Increase the vertical drop by adding a run to a point 150 feet lower down but requiring the installation of an additional chair lift to bring skiers back up, without additional snow making coverage.
3. Same as number 2, but adding 2 acres of snow making cover.
4. Increase the longest run by 0.2 mile to boast 3.5 miles length, requiring an additional snow making coverage of 4 acres.

Assumptions in the scenario analysis:

The expected number of visitors over the season is 350,000 and, on average, visitors ski for five days.

Scenario 1
Close up to 10 of the least used runs

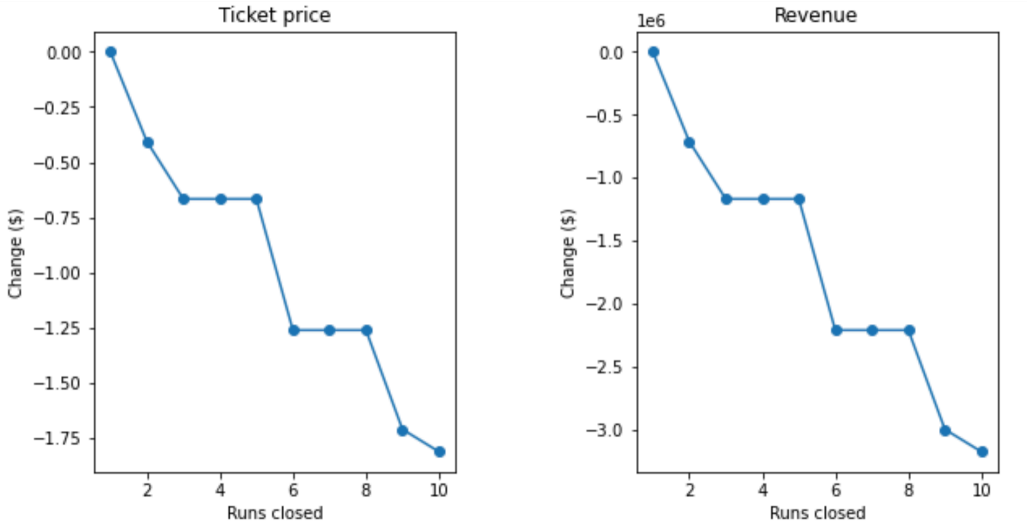

FIG 2. CHANGES IN TICKET PRICE VS RUNS CLOSED

Closing one run makes has no effect on ticket price. Closing runs 2 and 3 successively reduces support for ticket price by nearly $0.75. Closing runs shows to have step like pattern. Meaning that If Big Mountain closes down 3 runs or runs 3, 4 and 5, since there's no further loss in ticket price. It is not recommended to increase the closures down to 6 or more as it leads to a large drop in ticket price as well as revenues.

Scenario 2
This scenario increases support for ticket price by $8.61
Over the season, this could be expected to amount to $15065471

Scenario 3
This scenario increases support for ticket price by $9.90
Over the season, this could be expected to amount to $17322717

Scenario 4
0 increase in ticket price.

Scenario 2 seems to be the most reasonable scenario.