

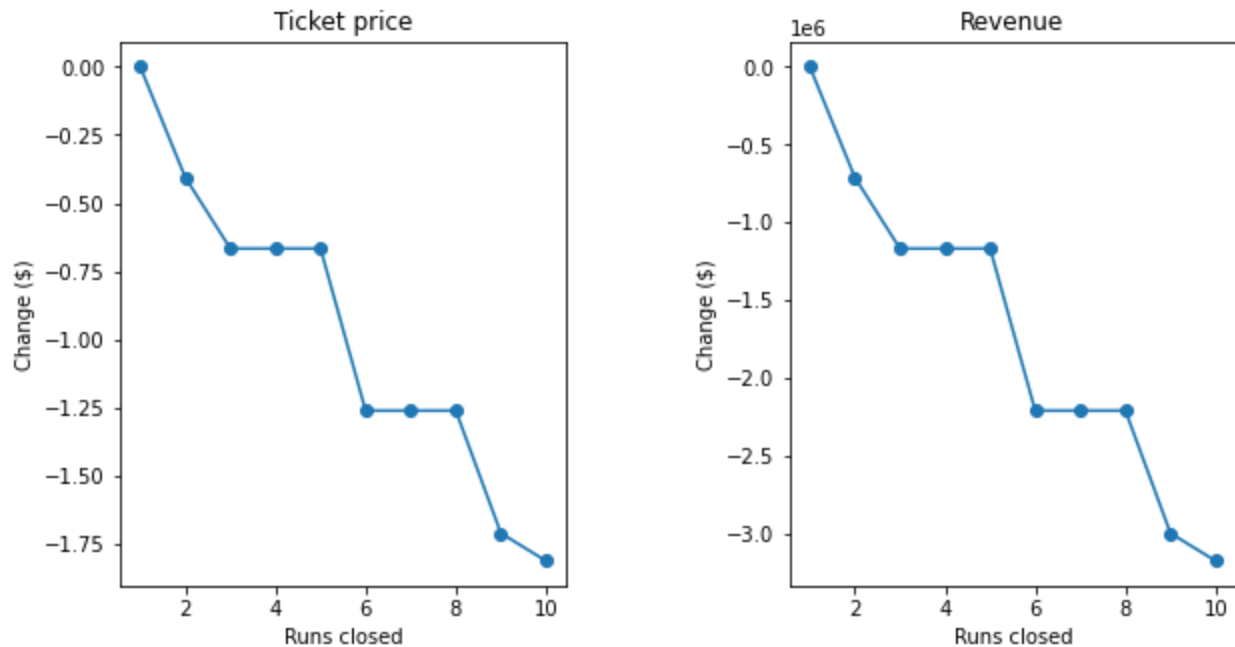
Problem Statement:

Big Mountain Resort offers spectacular views of Glacier National Park and Flathead National Forest, with access to 105 trails. Every year about 350,000 people ski or snowboard at Big Mountain. The business desired guidance on selecting a better value for their ticket price. Considering several changes hoping to reduce costs without reducing ticket price or increasing ticket price.

Possible Scenarios:

We looked at several scenarios to remedy the situation above:

1. Permanently closing up to 10 of the least used runs.
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 above, but adding 2 acres of snow-making cover.
4. Increase the longest runs by 0.2 mile to boast 3.5 miles in length, requiring additional snow-making coverage of 0.4 acres.



Solution:

After running models on each of the above scenarios, we conclude that scenario 2 is the optimal solution. The best model here was scenario 2 as scenario 3 included increasing snowmaking (with associated cost) but yielded no further gain in the ticket price. In Scenario 2 we are really only operating expenses that are increasing that which is associated with running 1 more chair lift. Adding a single run (associated with that chairlift) would already give the mountain more than 150 feet of vertical drop and would mostly be a one-time cost only.

We would suggest to business leadership to close at least one run and ideally 6-10 of their least used runs. The model says closing one run makes no difference. Closing 2 and 3 successively reduces support for ticket price and so revenue. If Big Mountain closes down 3 runs, it seems they may as well close down 4 or 5 as there's no further loss in the ticket price. Increasing the closures down to 6 or more leads to a large drop.