Big Mountain Resort analysis

Problem Identification

Big Mountain Resort's pricing strategy on their ticket value has been an average of other ski resorts ticket value plus a premium. There is reason to believe that Big Mountain Resort could capitalize more per ticket due to its facilities, the business wants a new data backed up ticket value.

Recommendation and key findings

Blue Mountain ski resort located in Montana has one of the highest vertical drops in the market, which resulted to be an important variable in various models done to estimate ticket value. Both of the models had the same dominant features in common:

- FastQuads
- Runs
- Snow Making_ac
- vertical_drop

The model used to estimate the ticket price was Random Forest Regressor, the **recommended ticket price** is to increment the original ticket price by a range in between of **9.5$ - 10.5$.**

Modeling results and analysis

The models used to estimate this ticket price were Lineal Regression and Random Forest Regressor, which resulted in very similar predictions, with only 1$ difference in the estimated price.

Linear regression model estimated ticket price: + 10.5$

Random Forest Regressor model estimated ticket price: +9.5$

The difference in the modeling is due to a lower cross-validation mean absolute error and less variability in the Random Forest Regressor. It is also recommended if further analysis in this subject is needed to use less data due to the fact that the essential set of data for this analysis is around 40-50 observations.

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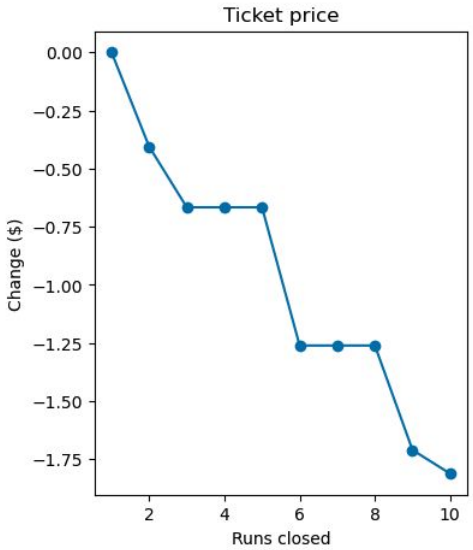
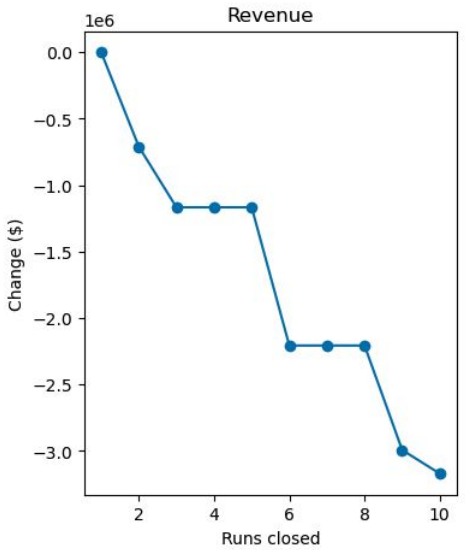
Scenario 1: Permanently closing down up to 10 of the least used runs.





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 ticket price.
Increasing the closures down to 6 or more leads to a large drop.

Scenario 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**

This scenario increases support for ticket price by $8.61

Over the season, this could be expected to amount to $15065471

Scenario 3 and 4 do not increase the ticket price significantly.

Summary and conclusion

In conclusion based on the attributes from Big Mountain Resort, there is an opportunity to increase the ticket price by a range in between of 9.5$ - 10.5$. This will maximize the profit for the resort while taking advantage of their ski resort dominant features.