BIG MOUNTAIN RESORT

Ticket-price Prediction

Problem Identification

Problem statement: How to increase Big Mountain resorts ticket prices by 10% over the next 2 years, by harnessing the true potential of our resorts facilities.

- Big Mountains current ticket-prices do not reflect the TRUE value of the facilities and service provided at Big Mountain resorts.
- How do we reduce the operating costs at this resort, without compromising quality, and undermining any potential ticket-price increase?
- How much can Big Mountain increase its ticket price without upsetting the current market?

Key Findings

- We can increase Increase ticket-price to a maximum of $95.87, from an original price of $81.00.
- Reducing the number of runs by more than 1 isn't viable.
- We must be cautious when implementing any ticket-price increase, because the data we are privy to, has always been quite limited. Also, any future ticket-price increase must be done carefully to prevent BM from upsetting the market.

Recommendation

We recommend that the executive members of Big Mountain implement "Scenario 2" of our test models. In this scenario, we reduce the number of runs by 1, increase the number of chair lifts by 1 and increasing the vertical drop by 150 feet. We believe this will allow Big Mountain to increase its ticket-price by $1.99, which would bring in around $3,474,638 over the season.

Modeling Results and Analysis

Scenario 1 : Close up to 10 of the least used runs
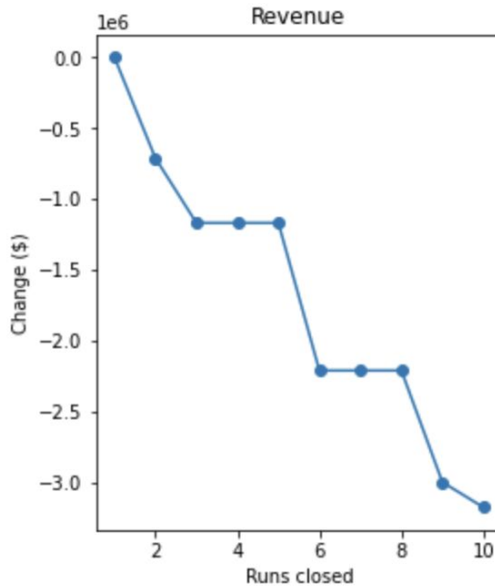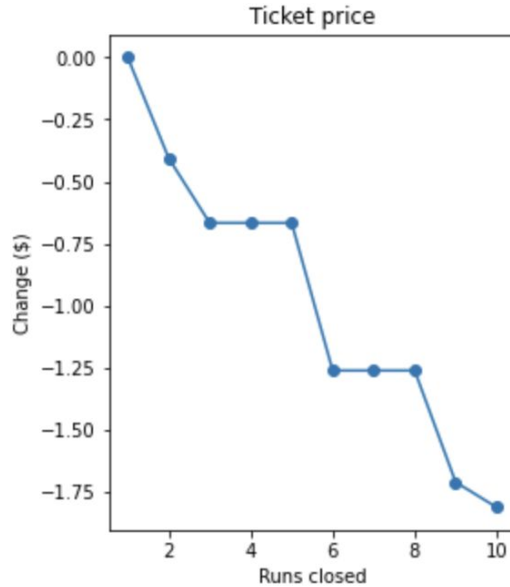
Only closing one run makes no difference. Closing 2 or 3 will reduce support for ticket-price and revenue increase. This increases in further runs, therefore closing more than 1 run isn't advisable.

Modeling Results and Analysis

Scenario 2 : Add a run, install a chair lift , and increase vertical drop by 150 feet.

Equation ;

```
ticket2_increase = predict_increase(['Runs', "vertical_drop", "total_chairs"], [1, 150, 1])
revenue2_increase = 5 * expected_visitors * ticket2_increase

print(f'This scenario increases support for ticket price by ${ticket2_increase:.2f}')
print(f'Over the season, this could be expected to amount to ${revenue2_increase:.0f}')
```

Modeling Results and Analysis

Scenario 3 : This is a repeat of scenario 2, only this time we add 2 acres of snow making

Equation ;

```
ticket3_increase = predict_increase(['Runs', 'vertical_drop', 'total_chairs', "Snow Making_ac"], [1, 150, 1, 2])
revenue3_increase = 5 * expected_visitors * ticket3_increase

print(f'This scenario increases support for ticket price by ${ticket3_increase:.2f}')
print(f'Over the season, this could be expected to amount to ${revenue3_increase:.0f}')
```

Support for ticket-price increase did not grow, meaning that such a small increase of 2 acres of snow making area, makes little to no difference.

Modeling Results and Analysis

Scenario 4 : Increase the longest run by 0.2 miles and committing to snow coverage by adding 4 acres of snow making capability.

Equation ;

predict_increase(["LongestRun_mi", "Snow Making_ac"], [0.2, 4])

This scenario did not support any ticket-price increase whatsoever.

Summary

Using the very much limited dataset we had meant that any conclusion should be taken with a grain of salt. We discovered there is room to increase price to a maximum of $95.87, from $81.00. After testing several models, we realized that there was a specific model that would see us increase ticket-price by $2.00.

Conclusion

In conclusion, we believe that at a $2.00 ticket-price increase and a seasonal rise of $3474638 in ticket gains, the executive board members at Big Mountain will find this model a good foundation to build and achieve its goal of increasing its ticket price by 10% over the next 2 years.