BIG MOUNTAIN SKI RESORT: AN ADDITIONAL CHAIR LIFT

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The Problem

- Big Mountain Resort has installed an additional chair lift

- Need to cut back on expenses or increase sources of revenue to make up for the cost

Recommendations

- Add an additional ski run to the resort
- Increase vertical drop (difference in elevation from base to summit) by 150 feet

Other Findings:

- Increasing the length of a run doesn't change anything
- Closing down the least used ski runs doesn't change anything

Modeling Foundation

- We set up our model to analyze ticket pricing as a function of other data metrics of other competing ski resorts across the country

- Used a 70-30 train-test split on our data

Model Type

- Random Forest

- MAE (Mean Absolute Error) of about 9.5, meaning ticket price predictions will at most be off by around $9.50

Model Analysis

- Tested 4 scenarios
    1. Closing least used runs
    2. Add run + install new chairlift
    3. Add run + install new chairlift + add 2 acres of snow making
    4. Extend length of longest run + add 4 acres of snow making
- Conclusions
    - Closing runs doesn't increase revenue
    - Adding runs doesn't increase revenue
    - Adding acres of snow making doesn't increase revenue
    - Installing a new chairlift DOES increase revenue

Conclusion and Recommendation

- Stick to just installing the additional chairlift and nothing else
- Raise ticket price by $2.00 to make up for the cost of the chair lift