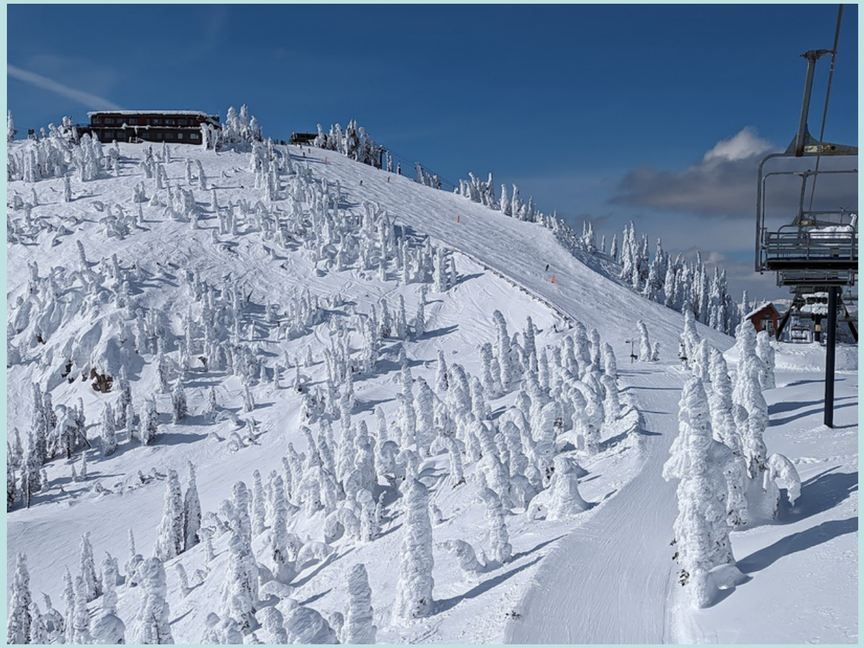

Big Mountain Resort

ticket price suggestions

Problem Statement

How should Big Mountain Resort determine the ticket prices for this season and arrange the costs to be able to cover the expenses of the new chair lift, which increases operation costs by $1,540,000?

Context of the Problem

- *new chair installation*
- *additional operating cost of $1,540,000*
- *increase in profit. to cover additional cost*
- *2 strategies:*
  - *increasing the ticket price*
  - *lowering the costs*

Key Findings of Modeling Phase

- The baseline model using the mean ticket price showed that Big Mountain Resort might be overcharging, as the model predicted a higher price.
- Feature importance analysis indicated that vertical drop, fastQuads, runs, snowmaking area, and total chairs were important features in predicting ticket prices.
- Random forest regression outperformed linear regression in terms of mean absolute error and variability.
- It was determined that the dataset size was sufficient for the analysis, and there was no need for additional data.

Recommendations

- **Pricing Adjustment:** *Big Mountain Resort could consider increasing its ticket prices slightly, as the modeling suggested potential room for an increase. However, any price increase should be carefully implemented to avoid deterring visitors.*
- **Scenario Analysis:** *The resort should carefully evaluate the scenario of increasing vertical drop, as it was shown to have a positive impact on ticket prices. This decision should be balanced with the cost of installing an additional chairlift.*
- **Feature Enhancement:** *Continue to focus on maintaining and enhancing key features that contribute to the resort's competitiveness, such as vertical drop, fastQuads, runs, and snowmaking capabilities.*
- **Regular Data Analysis:** *Regularly analyze visitor data, cost data, and competitor information to make informed pricing and operational decisions.*
- **User-Friendly Model Access:** *Develop user-friendly interfaces or dashboards for business analysts and decision-makers to explore different scenarios without the need for constant model retraining.*
- **Monitor Performance:** *Continuously monitor the performance of the resort and the impact of any changes in pricing or operations on revenue and profitability.*
- **Business Leaders' Involvement:** *Engage business executives in the decision-making process and ensure that they are aware of the modeling results and recommendations.*

Scenario Analysis

Several scenarios were analyzed to explore potential cost-cutting or revenue-increasing strategies for Big Mountain Resort. The scenarios included closing runs, increasing vertical drop, and expanding snowmaking coverage. The key findings from the scenario analysis include:

- *Closing a small number of runs had little impact on ticket prices, but closing a significant number could lead to a substantial drop.*
- *Increasing vertical drop was found to have a positive impact on ticket prices.*
- *Expanding snowmaking coverage had no significant impact on ticket prices.*
- *Big Mountain Resort was found to be competitively positioned in terms of various features, despite its high ticket prices.*

Thank you!