Data-Driven Pricing Strategy for Big Mountain Resort

Introduction

In the competitive landscape of ski resorts, establishing a pricing strategy that reflects the value of individual facilities while maximizing overall revenue is paramount. Big Mountain Resort aims to explore data-driven pricing strategies that assess the contributions of its unique offerings, including a new chair lift, to enhance the guest experience and drive financial performance. This paper outlines the approach to developing a robust pricing model and the anticipated impact of various facilities on pricing and visitor distribution.

Objectives and Goals

The primary objectives of this project include:

1. **Developing a Pricing Model:** Create a pricing model that accurately reflects the value of Big Mountain Resort's facilities, leading to increased overall revenue.
2. **Maximizing Ticket Prices:** Achieve a higher ticket price without significantly reducing visitor numbers, ensuring that value perception remains intact.
3. **Providing Actionable Insights:** Offer insights to support investment decisions that either reduce operational costs or justify higher pricing.

Data Analysis Framework

To inform the pricing strategy, we will analyze data from 330 resorts, including Big Mountain Resort, focusing on key factors that influence ticket pricing. This analysis will incorporate facility details, pricing structures, visitor numbers, trail lengths, lift details, and geographical factors. Our findings reveal that Alaska has the largest ski areas, California the highest population, and New York the most ski resorts.

We will assess revenue distribution by examining ticket prices for adults on weekends, segmenting these prices into quartiles for granular analysis. Scatterplots and Principal Component Analysis (PCA) will facilitate comparative visualization of the data.

Modeling Approach

A baseline performance will be established by calculating the average ticket price, followed by the development of a linear regression model. Initial results indicate a strong performance in cross-validation and on test splits. A random forest regressor will also be explored, as it provides competitive performance while offering insights into feature importance.

Despite some data gaps—particularly concerning operational costs associated with the new chair lift—our analysis shows potential for a price increase. The modeled price significantly exceeds the current ticket price, suggesting that adjustments are feasible without alienating

customers. To further support this recommendation, a comparison with competitor pricing will be conducted to demonstrate Big Mountain's market positioning.

Stakeholder Considerations and Future Directions

Resistance from stakeholders is a potential challenge, especially if recommended pricing strategies result in significant ticket price increases. Therefore, effective communication of the model's value and insights is crucial. Engaging stakeholders with data-backed presentations will help alleviate concerns and facilitate buy-in for the proposed changes.

Furthermore, to enhance future pricing recommendations, it is essential to collect additional data on operational costs, including maintenance, employee salaries, and snow-making expenses. Such data will refine our pricing model and improve its accuracy.

Conclusion

If the leadership team finds the pricing model useful, it could serve as a foundation for exploring various pricing scenarios and facility upgrades. To empower business analysts, developing an interactive tool that allows for real-time input of different features and pricing scenarios will enable Big Mountain Resort to make informed, data-driven decisions about pricing and facility investments. Ultimately, this project aims to position Big Mountain Resort as a leader in the ski resort market through strategic pricing and enhanced guest experiences.