Guided Capstone Project Report

1. Introduction

Big Mountain Resort is a prominent ski resort situated in Montana, bordering Glacier National Park and Flathead National Forest. Boasting access to 105 trails, the resort serves approximately 350,000 visitors each year. Despite the impressive figures and a sizable offering in terms of facilities and skiable terrain, it is crucial to explore strategies that maximize profitability, optimize ticket pricing, and identify cost-saving measures without compromising customer experience. This report encapsulates a comprehensive analysis of these strategies, intending to provide data-driven recommendations to improve Big Mountain Resort's operations and profitability.

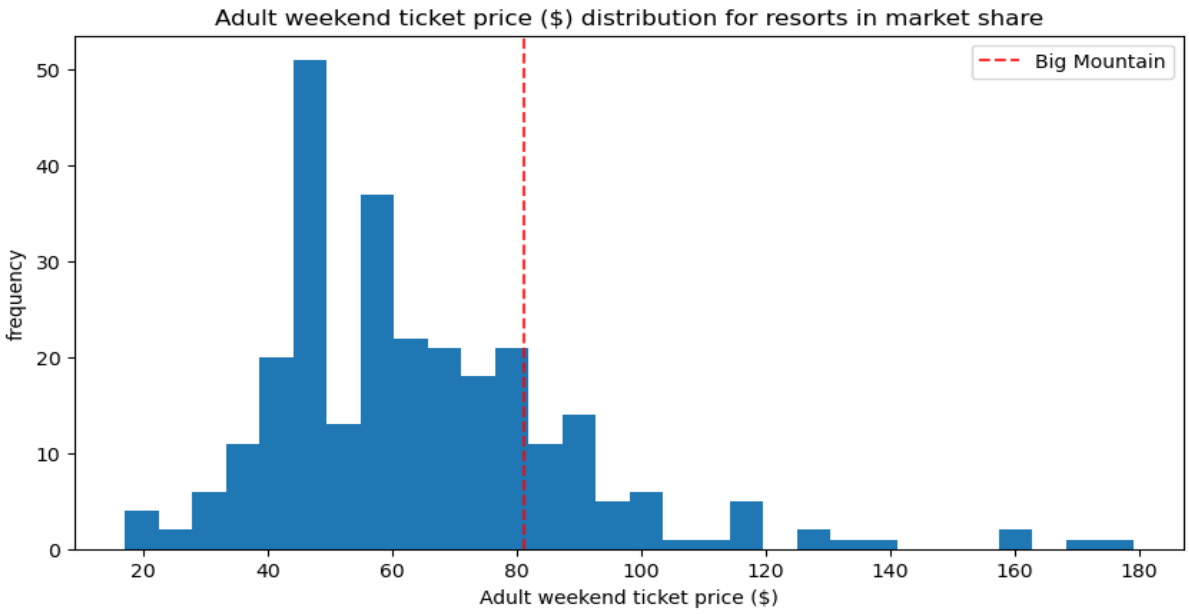
2. Dataset

The data set used for the analysis contains information about various ski resorts, including Big Mountain Resort. It Includes Numerical and categorical features such as vertical drop, snow-making area, total chairs, fast quads, runs, longest run, trams and skiable terrain. The dataset also provides information about other ski resorts across different regions and states. The missing data strategy employed involved using a mean or median imputation or predictive modelling for missing values based on the other characteristics of the resorts.

3. Key findings

3.1 Resort Features

- Big Mountain Resort stands out in terms of vertical drop, offering a significant advantage over other resorts.
- The resort excels in snow-making area, ranking very high. This factor will provide favorable snow conditions throughout the season.
- The Resort has a large number of total chairs, positioning well above the majority of resorts.
- The number of fast quads at Big Mountain Resort is higher than most resorts.
- In terms of the number of runs, Big Mountain Resort compares favorably to many resorts.
- The resort has one of the longest runs among all resorts.
- Trams are not standard in the resorts, including our resort.
- The Big Mountain Resort has a substantial skiable terrain, positioning it among resorts with a large amount of terrain.



3.2 Price Positioning

The recommendation centers around the implementation of variable ticket pricing. Currently, the resort ticket pricing operates on a fixed structure, regardless of the time of the year or occupancy rate of the resort.

Certain periods of the year attract more visitors, typically around holidays or weekends and the peak of the snowfall periods. There is an opportunity to increase the price without impacting demand significantly. During off-peak times when numbers of visitors are typically lower, I suggest lowering ticket price slightly to increase visitation during these periods. This structure would allow to maximize revenue throughout the year.

4. Conclusions.

Depending on the scenario, our model suggests the ticket price could increase, in some cases by up to $1.99. Over the season, this could be expected to increase the revenue amount to $3,474,638. These scenarios involve the possibility of permanently closing down some of the least used runs . However, closing more than five runs may lead to a large drop in support for the ticket price and hence revenue.

5. KPI and Future course of action.

In order to validate these recommendations, it is very important to test them within a real-world context of demand based on different pricing structures. This might incorporate implementing A/B testing for varying price modifications across distinct customer segments (this could involve offering two different pricing structures to similar visitor segments at the same time and then analyzing which price point

generates more total revenue, occupancy, or customer satisfaction). The effectiveness of the recommendations can be measured by evaluating parameters such as total revenue, rate of occupancy, customer responses, and the frequency of return visits. As we move forward we can use obtained information to find the balance between demand, revenue, customer satisfaction and fine tune the pricing suggestions.