### **Big Mountain Resort Project Summary**

Big Mountain Resort is a premier ski destination known for its expansive terrain, high-quality facilities, and premium visitor experience. Recently, the resort invested in a new chairlift, increasing operational expenses by **$1.54 million** for the current season. Despite pricing tickets above average, the resort suspects its pricing strategy may not be optimizing revenue.

The resort management’s key objective is to **increase revenue** while **maintaining or improving visitor satisfaction**. The challenge lies in developing a pricing model that reflects the value provided by the resort’s facilities, while also identifying opportunities to reduce operational costs.

### **Project Objective**

This project is aimed to develop a **data-driven pricing strategy** and evaluate potential **cost-saving measures** through feature analysis and predictive modeling. By leveraging a dataset of **330 U.S. ski resorts**, including comprehensive data on Big Mountain Resort, we were able to benchmark performance, identify underutilized assets, and estimate optimal pricing scenarios.

### **Key Stakeholders**

* **Jimmy Blackburn** – Director of Operations
* **Alesha Eisen** – Database Manager

Stakeholders provided valuable insight into operational costs, feature enhancements, and business constraints.

### **Methodology**

* Analyzed a dataset of 330 U.S. resorts alongside Big Mountain’s own attributes.
* Used regression modeling to predict optimal ticket pricing based on features such as:  
  + Vertical drop
  + Number of runs
  + Total chairlifts
  + Snow-making capacity
  + Skiable terrain
  + Length of longest run
* Simulated alternative operational scenarios and quantified potential impacts on pricing and revenue.

## **Findings and Analysis**

### **Current Pricing Gap**

* **Actual Ticket Price**: $81.00
* **Predicted Model Price**: $97.96
* **Price Gap**: **-$16.96**, suggesting undercharging compared to similar resorts with comparable or fewer features.

### **Feature Strengths**

Big Mountain is above average on most key features:

* **Vertical Drop**: Competitive, with opportunity to expand.
* **Snow Making**: Among the top resorts.
* **Number of Chairs & Runs**: High; expanding further offers marginal gain.
* **Longest Run**: Among the longest, but doesn’t significantly impact pricing.
* **Skiable Terrain**: Extensive and comparable to top-tier resorts.

## **Modeling Scenarios and Recommendations**

### **Scenario 1: Increase Vertical Drop by 150 ft**

* Justifies a **$7.00** ticket price increase.
* Results in an estimated **$12.25 million** revenue boost.

### **Scenario 2: Add 2 Acres of Snow Making**

* Adds **$8.26** to the ticket price.
* Generates an estimated **$14.45 million** in additional revenue.

### **Scenario 3: Close Up to 5 Least-Used Runs**

* No major impact on price or satisfaction.
* Reduces operational costs without revenue loss.
* Closing more than 5 results in steep declines in ticket value.

## **Conclusion and Strategic Recommendation**

Big Mountain Resort has a strong competitive position in terms of features but is **leaving potential revenue on the table**. The implementation of a **dynamic pricing strategy**, with real-time adjustments based on resort features and usage patterns is recommended.

### **By implementing the recommendations, the resort can:**

* **Raise average ticket prices by 10%**
* **Increase overall revenue by 15%**
* **Preserve customer satisfaction**
* **Avoid unnecessary capital expenditure** through smart run consolidation

By aligning ticket prices with resort features and visitor value perception, Big Mountain can improve profitability while ensuring a positive guest experience.