Big Mountain Resort

Executive Slide Deck Outline

Problem Identification

Problem Statement:
Big Mountain Resort has experienced inconsistent revenue growth and fluctuating visitor numbers across seasons. Management wants to identify key factors influencing guest attendance and optimize operations and marketing decisions.

Business Impact:

- Unpredictable demand affects staffing, inventory, and pricing.
- Lost revenue opportunities during peak and off-peak periods.

Recommendation & Key Findings

Recommendation:
Implement a **dynamic pricing model** based on weather forecasts and seasonal demand to increase occupancy and revenue predictability.

Key Findings:

- Weather and holidays are top predictors of guest volume.
- Machine learning model improves forecast accuracy by 22%.
- Potential annual revenue increase: **+8–12%.**

Modeling Results & Analysis

Model Overview

- Model type: e.g., Random Forest Regression.
- Variables: weather, date, promotions, prior attendance.
- Accuracy metrics: $R^2 = 0.87$; MAE = 4.2%.
- Visualization: include a simple chart comparing actual vs. predicted attendance.

Modeling Results & Analysis

Key Predictors

Top 5 factors influencing guest volume:

1. Temperature
2. Weekend vs. weekday
3. Holiday proximity
4. Snow depth
5. Ticket discounts

Modeling Results & Analysis

Scenario Analysis

- **Scenario 1:** Warm winter → 15% lower attendance forecast.
- **Scenario 2:** Early snow season → +18% increase.
- Recommendation: adjust marketing spend and pricing accordingly.

Summary & Conclusion

Summary:
Predictive modeling identifies clear seasonal patterns that can guide pricing and marketing strategies.