Big Mountain Resort: Executive Presentation

Data-Driven Pricing Strategy

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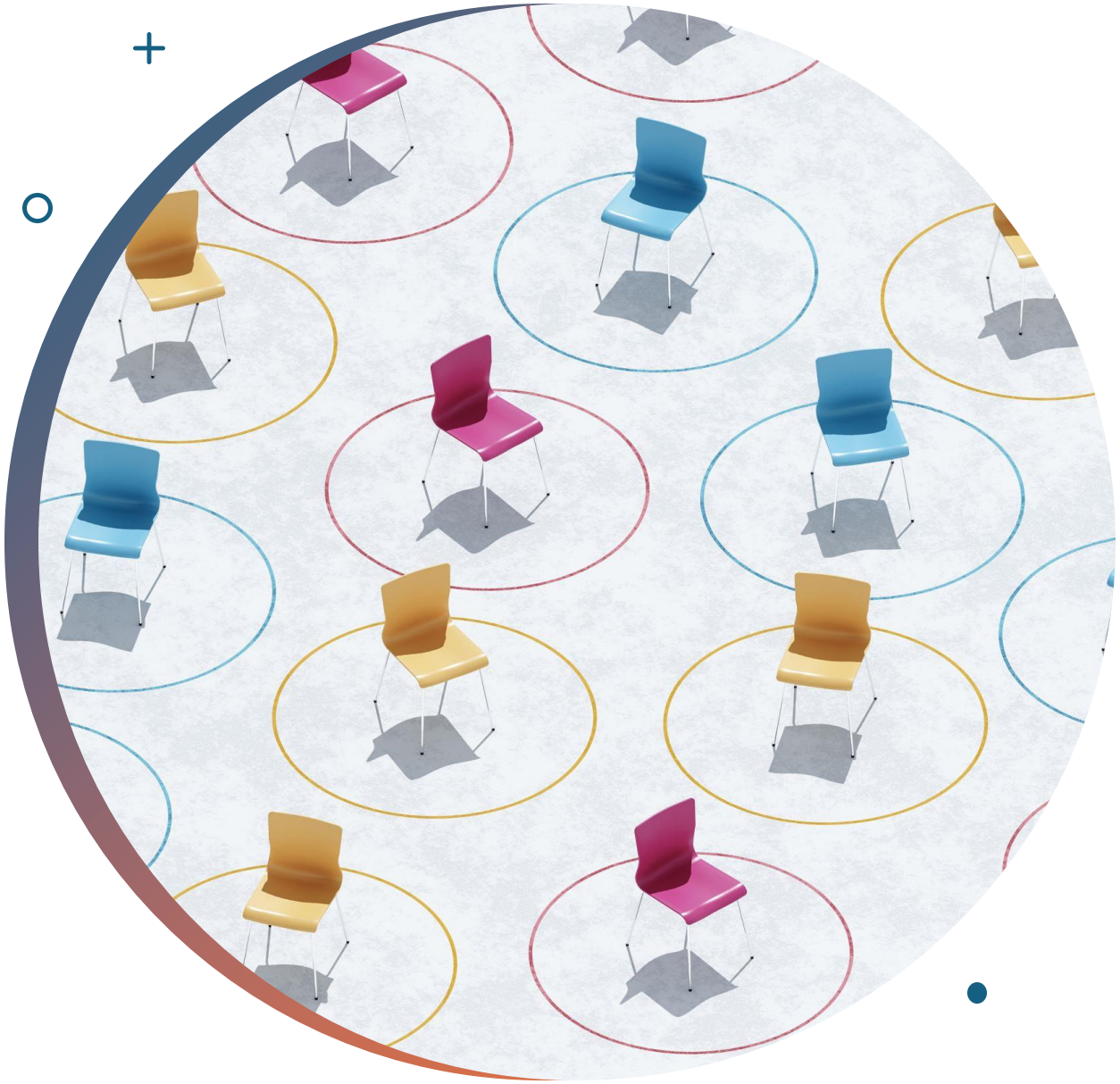


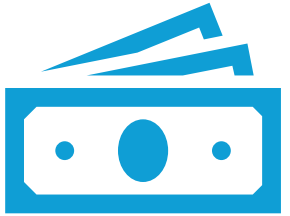
Problem Identification

- Challenge:
  - Current ticket price is $81
  - Undervalued compared to similar resorts
  - The goal: increase revenue while maintaining guest satisfaction
  - Consider further upgrades like a new chair lift in pricing strategy

Key Questions

What features influence the ticket pricing?

How much can we raise prices without reducing demand?



How will the changes affect profitability?

Key Findings & Recommendation

RECOMMENDED PRICE IS $94

THE NEW CHAIR LIFT ADDS ~$2 PER TICKET, SO STILL PROFITABLE

RANDOM FOREST MODEL CONFIRMS PRICING POTENTIAL

Data Preparation & Feature Engineering

Cleaned and standardized data

Addressed missing values and outliers

Created new features to capture resort quality

Encoded categorical variables and scaled numeric data

Modeling Results

Models tested: Baseline, Linear Regression, Random Forest

Random Forest – best performance

R^2 ~0.87 | MAE: ~$4.9

Explains 87% of the variation in tickets compared to 81% of the Baseline Model

Lower MAE is better; price prediction was off $4.90, while Baseline had $5.30

Captured non-linear relationships and feature interactions

Feature Importance

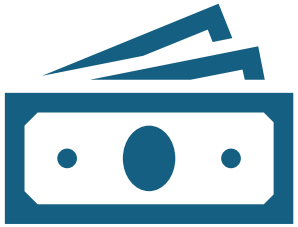
Top predictors of price:

Vertical drop

Number of runs

High-speed lifts

Snowmaking coverage



These explain most of the price variation

Summary / Conclusion

Big Mountain Resort is currently underpriced

Data supports raising ticket price to $94

Model confirms pricing is sustainable and profitable

Resort can invest in upgrades while maintaining guest satisfaction

Suggestions / Next Steps

1. Monitor customer response to new pricing
2. Try dynamic pricing with customer segmentation
3. Build dashboard for pricing scenarios
4. Update model regularly