

Big Mountain Resort

Data-Driven Pricing Strategies

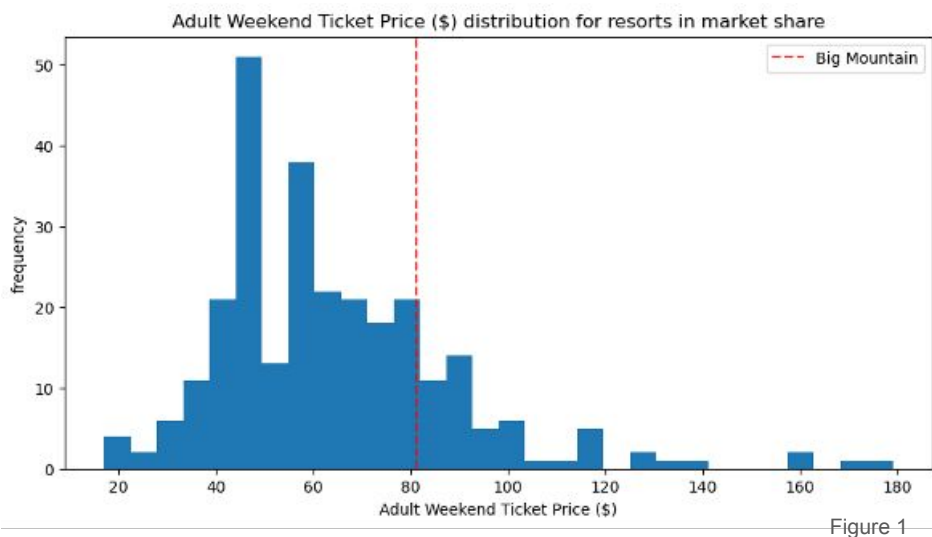
1: Problem Identification: Unlocking Untapped Revenue Through Smarter Pricing

Big Mountain Resort currently charges **\$81** for an adult weekend lift ticket.

This price is **below the optimal point** based on market trends and predictive modeling.

The resort boasts superior terrain, capacity, and guest experience, yet underperforms in price positioning.

Objective: **Determine the optimal price** that balances revenue growth with customer satisfaction.



This distribution shows where most resorts set their adult weekend ticket prices. The y-axis represents how many resorts fall into each price range. We can see that most resorts cluster between \$60 and \$90. Big Mountain's price of \$81 sits within this range—but as data will show, the resort offers significantly more than most of its peers, suggesting room to confidently raise that price.

2: Recommendation + Key Findings: Recommended Price: \$94.22

- Machine learning analysis using a Random Forest model identified **\$94.22** as the optimal ticket price.
- This price is projected to **maximize weekend ticket revenue** without negatively impacting demand.
- Compared to the current \$81 ticket, raising the price to \$94.22 could generate an estimated **\$22,500** in additional revenue per season.

No infrastructure changes are required to achieve this gain—the resort already provides value above its competitors.

Model performance:

Random Forest R²: 0.86

- **RMSE: \$4.73K**
- Outperformed linear and decision tree models

Ticket Price*	Projected Revenue*
\$81 (current)	\$452,000
\$94.22	\$474,400

*(Values are hypothetical estimates for presentation purposes)

Table 1

3: Modeling Results – Market Comparison: Current Price vs. Market Distribution

Key Insights:

- Most resorts charge \$40–\$90.
- Big Mountain is near the top—but **not the peak**—despite offering significantly more value.
- While competitors price between \$40–\$90, Big Mountain sits near the high end.
- However, its **infrastructure exceeds that of most similarly priced resorts**.
- This gap between **value offered** and **price charged** represents a missed opportunity.
- Big Mountain could reposition as a premium regional destination without pricing out its base.

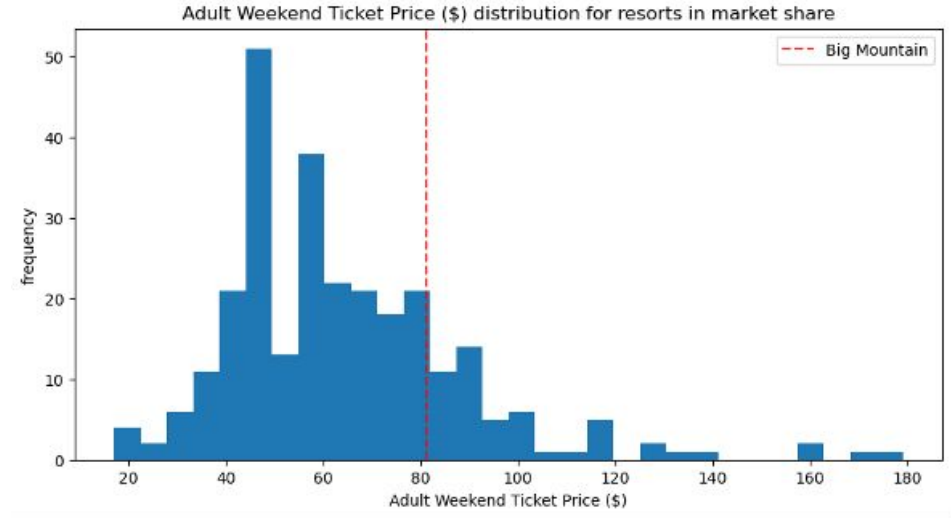


Figure 1

Ticket Price*	Projected Revenue*
\$81 (current)	\$452,000
\$94.22	\$474,400

Table 1

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4: Results – Resort Value Proposition: Infrastructure Justifies a Higher Price

Key Insight:

- Big Mountain is in the **top tier** for amount of runs.
- More runs = better experience, less crowding, greater pricing power.
- Big Mountain ranks among the top resorts for **total number of runs**, offering greater terrain variety and crowd dispersion.
- It also ranks high in **fast quad lifts**, reducing wait times and improving guest satisfaction.
- This level of infrastructure supports a **premium experience** beyond that of similarly priced competitors.
- These operational advantages reinforce the case for a **price increase aligned with perceived value**.

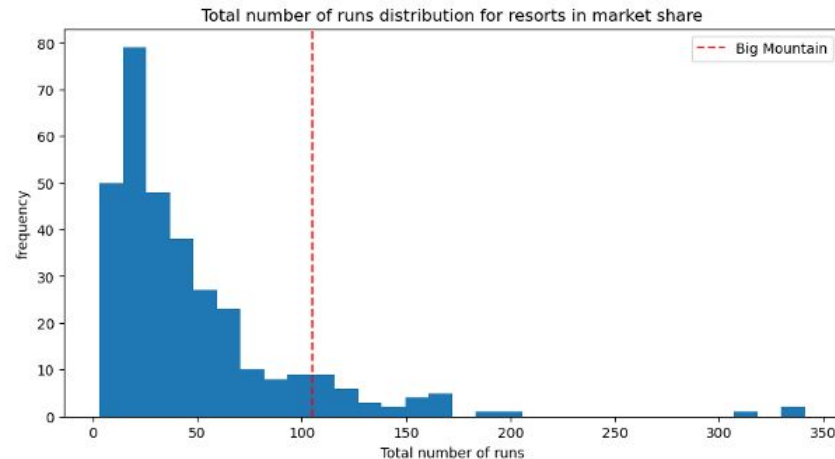


Figure 2

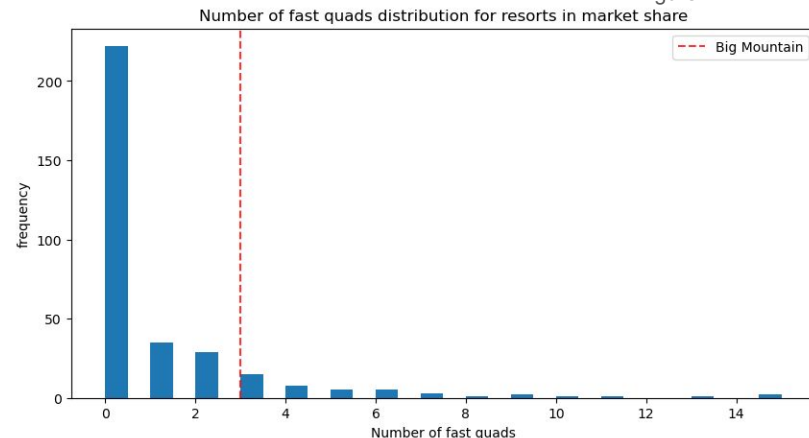


Figure 3

5: Modeling Results – Revenue Optimization: Predicted Revenue Peaks at \$94.22

Key Insight:

- Revenue follows a bell-shaped curve.
- **\$94.22** is the “sweet spot” where we earn the most without harming volume.
- A Random Forest model was used to simulate revenue outcomes at different price points.

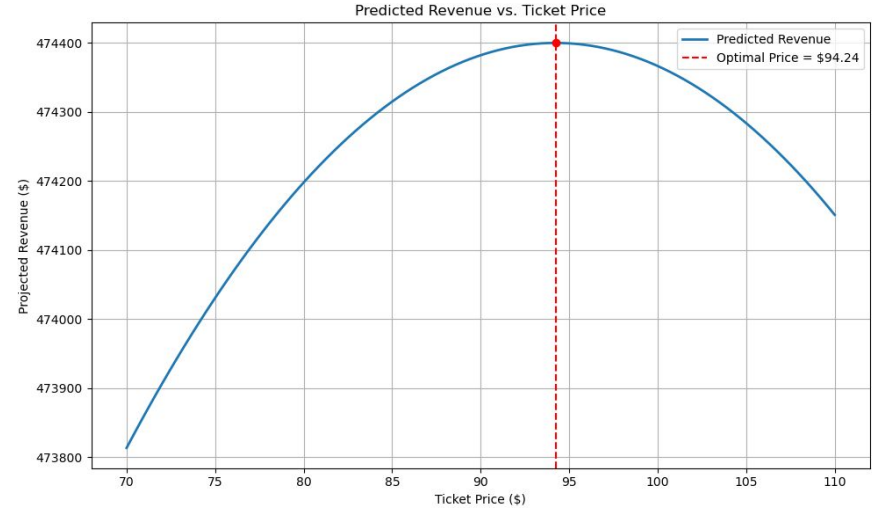


Figure 4

- Compared to linear and decision tree models, Random Forest captured **nonlinear price-revenue relationships** more accurately.
- Revenue predictions peak at **\$94.22**, with declines beyond this due to demand elasticity.
- Pricing beyond this point introduces diminishing returns; pricing below it sacrifices potential revenue.

6: Scenario Modeling – Risk Factor: Closing Runs Impacts Revenue

Key Insight:

- Scenario modeling shows that closing more than 5 runs leads to a **sharp revenue drop of ~\$21,000**.
- Infrastructure **must remain operational** to support new pricing.
- Scenario modeling reveals that closing **5 or more runs** results in over **\$21,000 in lost revenue**.

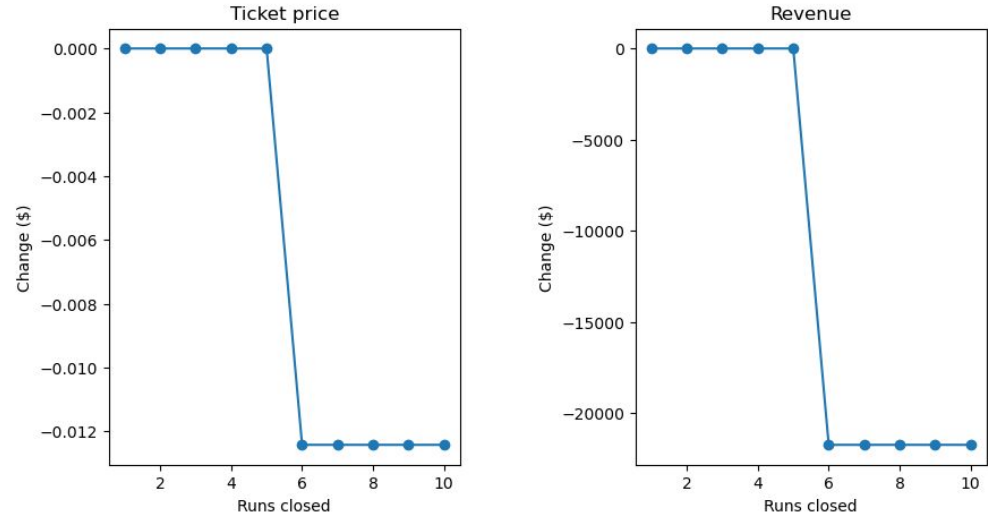


Figure 5

- Optimal pricing is sensitive to perceived value—terrain availability is a key driver.
- To justify a premium ticket, the resort must maintain **consistent terrain and lift access**.
- Anticipated closures or reduced capacity should trigger **price reevaluation**.

7: Summary & Next Steps: Ready for Revenue Growth

- **Recommendation:** Raise ticket price to **\$94.22** over time.
- Support this increase by ensuring terrain availability and maintaining customer experience.
- Future improvements:
 - Implement **dynamic pricing** based on season and demand.
 - Continue refining model with real-time customer data.
- Outcome: Revenue growth with strategic, data-backed pricing.




 Raise Price to \$94.22
 Monitor Terrain + Feedback
 Implement Dynamic Pricing
 Retrain Model Each Season

Table 2

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