Problem Statement Worksheet (Hypothesis Formation)

By the end of this quarter, how can the Data Science team determine the values of Big Mountain's facilities and qualities (lifts, trails, elevation, views) compared to other resorts so these values can be used in calculating future season's ticket prices?

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1 Context

Big Mountain is a ski resort in Montana which caters to skiers of all levels and abilities. Visitors have many options for trails and lifts as well as views of Glacier National Park and Flathead National Forest. Ticket prices are higher than the overall average price for other ski resorts in their market. This pricing strategy is not based on specific features about the resort, but rather by just adding a premium to the average ticket price in the market. Big Mountain executives want to shift the pricing strategy from a simple calculation to a more data driven approach so that revenue can be maximized. However, they are unsure how to measure the value of their facilities compared to other ski resorts so that value can be considered in the ticket price calculation

2 Criteria for success

- By the end of this quarter, the Data Science team will provide a list that includes:
  - Facility/Quality
  - Value
- By the end of this quarter, the Data Science team will also provide a model that can be used to calculate ticket prices for future seasons

3 Scope of solution space

- Ticket price calculation model to ensure Big Mountain facilities are used in the calculation.
- Cost cutting measures to maximize profit will not be part of this solution.

4 Constraints within solution space

- A single CSV file is available for data analysis.
- Data does not exist for individual features at other resorts, such as individual runs or chair lifts.
- It is unknown if the other resorts take these factors into consideration when setting ticket prices.

5 Stakeholders to provide key insight

- Big Mountain CFO
- Director of Operations - Jimmy Blackburn
- Database Manager - Alesha Eisen

6 Key data sources

- CSV File from Database Manager
- Big Mountain & Other Resorts Data
  - Ticket Prices
  - Facilities
  - Other Qualities

Note: this was my original problem statement, but there is no way to measure this because there is no financial data available. I was thinking a combination of cutting costs and determining a value for the facilities would be used. But there is only facility data available.

By the end of this quarter, how can the data science team determine which market factors should be considered when setting ticket prices so that Big Mountain can increase next season's profits by 15% while only raising ticket prices by 5% compared to this season?