Problem Statement Worksheet (Hypothesis Formation)

Can we develop a model to accurately determine ticket price based on the facilities Big Mountain Ski Resort offers by next winter?

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1 Context

The current method of choosing ticket price is determined solely by charging a premium above the average ticket price. This method makes it difficult to quantify the value of investing in new facilities and the impact they should have on ticket price. Management is hiring a team of data scientists to better value their ticket price.

2 Criteria for success

The key to success in this project will be quantifying each facilities' impact on the ticket price. For example, how much more are consumers willing to pay when an additional lift is added that reduces average wait time by five minutes? The model will have to take all these variables into account and determine a ticket price that will yield the highest profits.

3 Scope of solution space

The scope of the initiative will be the facilities of Big Mountain Resort, as well as the facilities of other ski resorts and their ticket prices.

4 Constraints within solution space

Some aspects of why consumers are willing to pay more for a ticket may be difficult to quantify or be outside the collected dataset entirely. For example, the culture and community at Big Mountain may contribute to a consumer's willingness to pay.

5 Stakeholders to provide key insight

-Upper Management
-Database Manager
-Ski Riders of Big Mountain

6 Key data sources

The main dataset we will be using to create this model will be the CSV file provided to us by the database manager. It contains data on 330 resorts and several attributes that may affect ticket price, such as number of runs and total chairs.