Problem Statement – Guided Capstone Project

Context:

Big Mountain resort has recently decided to install an additional chair lift (to increase their total lifts from 11 to 12) which is going to cost the facility $1.54 million. Currently, Big Mountain does not efficiently utilize their facilities as well as they can and are potentially leaving revenue on the table as a result. Initial investigation has shown that they are not charging enough for tickets proportional to the value that they offer based on the facilities that are available at the resort. The data overview provided has facility information on 330 ski resorts in the United States. The way I would approach this problem would be to compare measurable attributes of each park to the price of their tickets. The prices of tickets are different for weekends vs weekdays, which makes sense because demand on weekends will be higher, resulting in higher priced tickets. By calculating the ratio of ticket prices to the quantity of different amenities and then plotting them on a scatterplot to compare the different resorts would provide good insight into how different facilities are able to either maximize the different aspects of their parks or where they could be improved upon. This kind of analysis would also have a quick turnaround time, which would be important given the estimated increase in operating costs for the upcoming season to allow management to better be able to make changes to either the ticket pricing structure or better utilize the facilities that the park offers.

Criteria for Success:

There would be two criteria for success. The first would be to determine if Big Mountain is incorrectly pricing their tickets given the amenities that are available. If it is the case, identifying what an appropriate ticket cost based on these existing factors would be one. The second is to determine if there are ways to expand the already available amenities based on how other parks operate. If there are opportunities to increase revenue by changing operations, ticket prices would not have to be impacted but we would still be able to drive up revenue.

Scope of solution space:

The specific items that would be focused on would be the measurable (quantitative) park amenities for Big Mountain and for the other 329 parks in the United States. Creating a model that appropriately prices tickets based on amenities and identifying gaps in offerings would be the key, using the data that already exists.

Constraints within solution space:

The data that we have received is all historical, so if other parks are looking to improve on their own facilities, then the information that we would be going off would be outdated and still potentially having gaps. Additionally, because the information that we are using does not have any customer feedback we are potentially missing out on important pieces of qualitative information that could be derived via surveys or focus groups which could provide insight to how customers perceive current pricing, would perceive future pricing, and how they perceive the facilities.

Stakeholders to provide key insight:

The only two contacts on the project are Jimmy Blackburn (Director of Operations) and Alesha Eisen (Database manager). Jimmy would be responsible for overseeing and approving any changes to the facility, and Alesha would be able to provide insight on the data itself as well as the systems and structures used for collecting it.

Data Sources:

The only datasource available for this is the CSV from the data manager. Comparing Big Mountain to resorts that are most similar to it (either by location, size, or offered amenities) would be he most helpful to answering this problem. Relevant data from this spreadsheet include facility location, ticket prices, number of lifts, number of runs, days open, projected days open, and run specifics (terrain parks present, longest runs, total skiable terrain, snowmaking machines, and vertical elevation).