In order to pinpoint a methodology to increase revenue for Big Sky Mountain by the end of the fiscal year we manipulated data that was reported by numerous ski resorts across the United States. We focused the given data set on ticket prices and how they varied by state. We especially focused on data points that compared the weekend and weekday prices across different areas.

We performed many different visualizations of the data to look for correlations that might not have been readily apparent by just looking at numbers. An interesting possible relationship that arose was higher priced tickets correlating with a resort's possession of a snow making machine.

In order to begin building a price model we tested a model's reliability in finding the average price of weekend tickets. Once we found the results satisfactory and confirmed we had enough data points we were able to build a fuller model with reduced variability.

Big Mountain Resort currently charges $81 for their weekend tickets. When using our predictive model based on other ski resorts in the US market we found that Big Mountain Resort's modelled price would be $95.87. Even with the expected mean absolute error of $10.39, this suggests there is room for an increase in current ticket prices. When comparing different features to other ski resorts such as: vertical drops, snow making, total chairs, fast quads, runs, longest runs, trams, and skiable terrain. Big Mountain frequently outscored many resorts in the quantity of facilities offered.

The three other suggested plans of action suggested by your company were:

- Permanently closing down up to 10 of the least used runs.

- Increasing the vertical drop by adding a run to a point 150 feet lower down but requiring the installation of an additional chair lift to bring skiers back up, without additional snow making coverage
- Another option was the same as the prior, but adding 2 acres of snow making cover
- Increasing the longest run by 0.2 mile to boast 3.5 miles length, requiring an additional snow making coverage of 4 acres

  Most of these had no effect on changing the bottom line for more profit or had a negative effect.

We could also run data with offered amenities such as spas, lodging, food, and etc. We could also look into the predictive pricing for weekday tickets. Yet, momentarily ignoring these factors we know changing the ticket price to $95.87 will increase Big Sky's profit in order to cover the cost of their new lift.

It is our conclusion that for the amount facilities offered by Big Sky Mountain they are undercharging for their weekend tickets.