This report aims to look at how appropriate the current ticket price of $81.00 is for Big Mountain Resort. In order to determine which facilities matter most to both visitors, a data set of 276 similarly sized ski resorts throughout the country was explored to produce a predictive model to aid in future facility investment plans.

The forest walk regression model yielded an average ticket price of $63.81 for the 276 resorts in the data set, lower than Big Mountain's current ticket price (**Figure 1**). Similarly, Big Mountain is the most expensive ticket price in Montana (**Figure 2**). In our analysis, we found that the features that were most important to determine ticket price were (from largest to smallest): fast quad chair lifts, the total number of runs, the snow making area in acres, and vertical drop.

Four scenarios (#1-4) were modeled to either cut costs or increase ticket prices. For these scenarios, the following assumptions were made: 350,000 visitors would visit the resort for the year, visitors on average will purchase tickets for 5 days, and calculations include the additional lift recently installed.

1) Permanently close up to 10 of the least used runs throughout the resort.
   We found that closing only 1 run has no effect on price, closing 2 or 3 runs will drop support for ticket prices and revenue (**Figure 3**). However, if 3 runs are closed, closing 4 or 5 may be considered as there is no further loss in ticket prices. Closures of 6 or more lead to a larger drop in prices/revenue.

2) Increase 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.
   This scenario increases support for ticket price by $8.61. Over the season, this could be expected to amount to $15,065,471.

3) Increase 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, and adding two acres of snow making cover.
   This scenario increases support for ticket price by $9.90. Over the season, this could be expected to amount to $17,322,717. However, this small increase in the snow making area does not make a significant difference in revenue.

4) Increasing the longest run by 0.2 miles to boast 3.5 miles length, which requires an additional 4 acres of snow making coverage.
   Our analysis determined that adding distance to the longest run had no significant effect on the price and therefore should not be considered.

Given these four possibilities, scenarios #1 or #2 are both possible based on future outlook. In the short term, pursuing scenario #1 in closing one run while maintaining ticket prices at $81 is expected to not significantly change revenue but save on some operational costs. While this run is closed, we can choose to pursue scenario #2 and increase the vertical drop of that run by 150 feet along with another shorter chair lift. Once completed, we can raise ticket prices by up to

about $8. Additionally, while possibly expensive, patrons are willing to spend more on ticket prices if the resort has more fast quad chair lifts.

Additional data that could be helpful in making this choice is usage data from customers throughout the Big Mountain Resort. Temporarily closing less popular runs and augmenting them may be a way to re-exhilarate these runs while increasing overall revenue.

Appendix

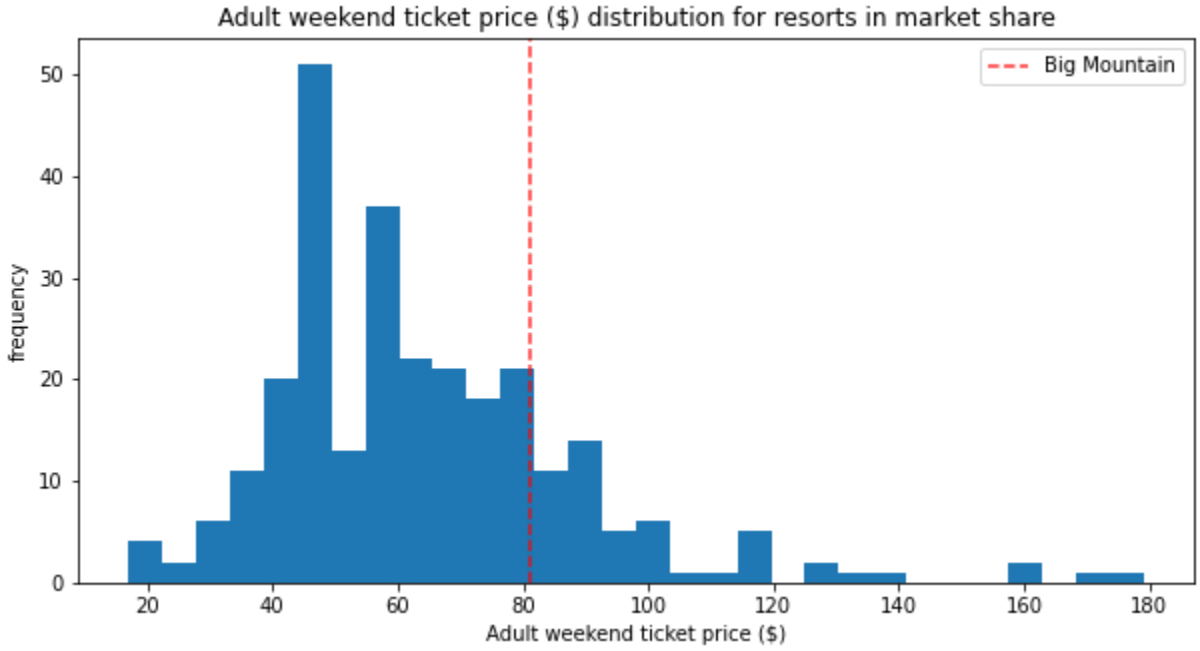

Figure 1: Adult Weekend Ticket Price ($) Distribution for Resorts in Market Share

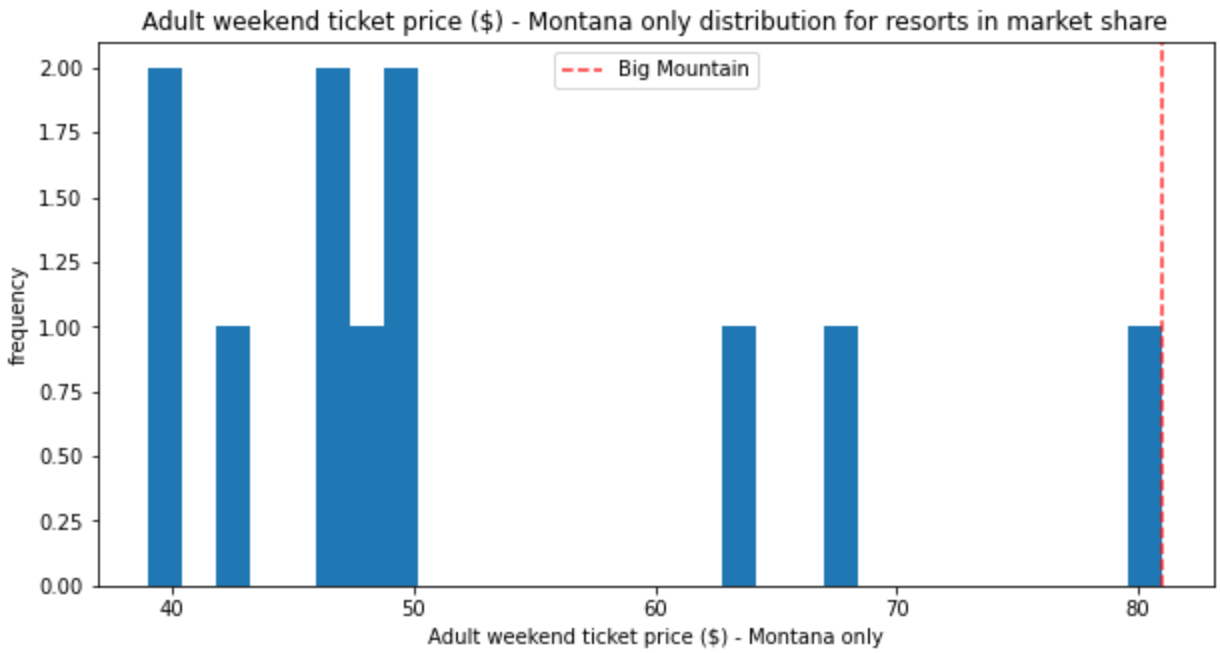

Figure 2: Adult Weekend Ticket Price ($) Distribution for Resorts in Montana

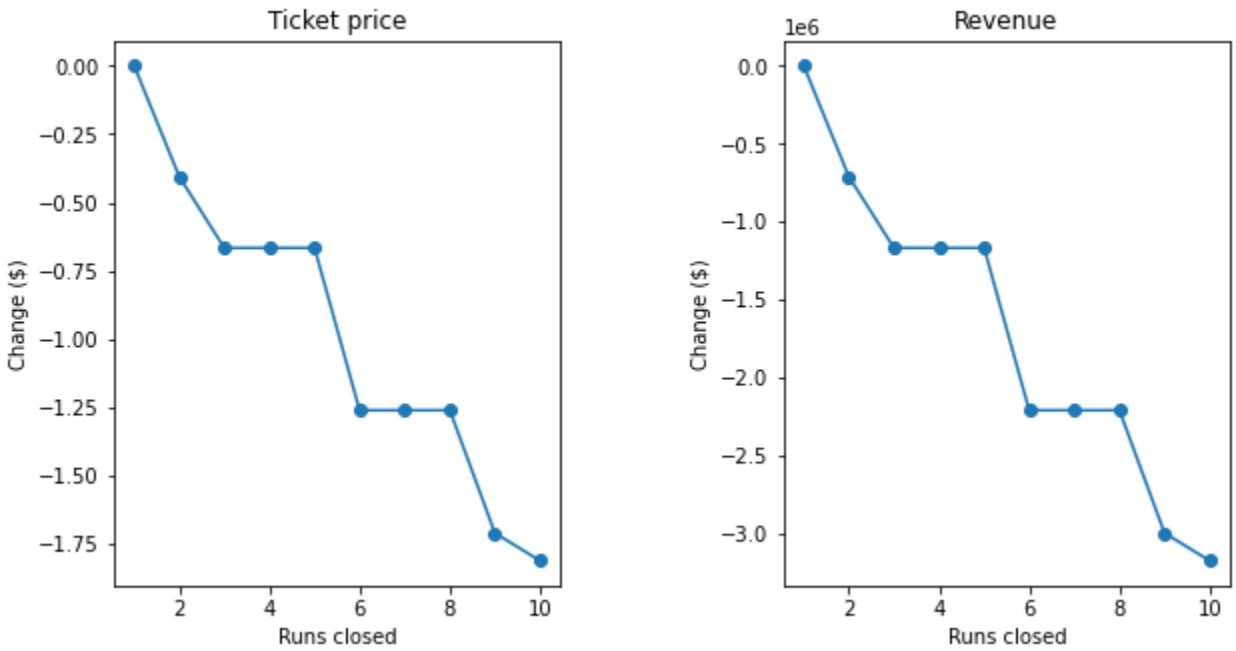

Figure 3: (Left) Number of Runs Closed vs Changes in Ticket Price (in $), (Right) Number of Runs Closed vs Changes in Revenue (in $1,000,000)