I would recommend BMR to keep their ticket price lower than the predicted price by my model, as they currently have the most expensive ticket price in the state of Montana, and could be hesitant to raise the price even more. Big Mountain Resort modelled price is $95.88, actual price is $81.00. Even with the expected mean absolute error of $10.36, this suggests there is room for an increase. However, including a fast chairlift that increases BMR's vertical drop is more valuable than a quad that increases skiable area when determining increased ticket prices. By adding Big Mountain is adding a run, increasing the vertical drop by 150 feet, and installing an additional chair lift. This scenario increases support for ticket price by $1.61 Over the season, this could be expected to amount to $2815217. In addition, BMR should assess their customer base.

Conversely, reducing cost by reducing the run count isn't substantial until reducing the run numbers by 2 and 3 successively reduces support for ticket price and so revenue. If Big Mountain closes down 3 runs, it seems they may as well close down 4 or 5 as there's no further loss in ticket price. Increasing the closures down to 6 or more leads to a large drop in revenue of $1.2 million. Leaving run closures as an inadequate way to increase positive carry.

This scenario calls for increasing the longest run by .2 miles and guaranteeing its snow coverage by adding 4 acres of snow making capability. There is no difference added by this scenario. Although the longest run feature was used in the linear model, the random forest model (the one we chose because of its better performance) only has longest run way down in the feature importance list.

In order to best make use of this model, BMR would have to allow their data analyst department to play with it. The stakeholders would have to provide some clear guidelines, such as what scenarios are possibly on the table, what the minimum offset of cost must be, and what the maximum ticket price they are comfortable with is. The model could potentially squeeze out a ticket price of $82.61 to cover the cost of the chairlift without taking away too much from the customer base.