When first approached about the Big Mountain Resort in Montana the team was curious: how do we help a resort that already seemed to dominate the industry of Montana when it came to entertainment? They had shared with us that they had installed an additional chairlift to assist with customers getting to where they wanted to go, and how can we help them cover the increase in costs? The team realized that we couldn’t just look at Montana, but had to expand our research to all states. We don’t want Big Mountain to just be the best resort in Montana,but in the entire country.

Looking at the data we saw that there were a lot of missing variables, but also variables that didn’t seem to affect the ticket prices, even among some of the more popular resorts, like the one in the East Coast with more populous communities. We then decided that the states didn’t matter but looking at the data as whole was our goal. We then used a random forest regression model in order to look into our data, and saw that our model showed an almost $10 difference between the modeled ticket prices and the actual ticket prices reported. We made note that the number of skiers that were reported to have come through the resort was an estimate, but also made note that this was under the assumption that all customers were purchasing a 5 day ski pass, which even though it was found to be mostly true doesn’t mean it’s entirely true.

We then looked at our options. We saw that closing one run didn’t affect revenue, but closing more would. There was actually a direct correlation between closing runs and lowering revenue, which is something we wanted to avoid. However, it is worth noticing that once you closed down 3 you could close down up to 6 before revenue dropped even further, so if that was the case the resort would be able to cut down on operating costs. We also looked into how much it would cost to add a new run, even higher than the tallest run currently reported. We would even hopefully get to use that new chair lift that they just installed and need to pay for, so it seemed like a win win. We also looked into the option of adding a run as well as adding more snow making facilities. That option turned out to only be about a dollar more expensive, so it seems worth it.

In conclusion, based on the data, our modeling, and the hard work done, our team has decided that increasing revenues for this upcoming season will be a two prong process: first, you will want to look into which are the least popular/hardest to maintain runs (our team can help with that as well), and then bid them farewell and close them down. The second prong will be to create a second run, one even higher than the top run, thus giving a further novelty to the resort because an increase in vertical drop is a VERY big draw for customers. This will cause an increase in revenue while all lowering costs, and give reason to raise ticket prices. After all, Big Mountain Resort would be really living up to its name for being a Big Mountain when it has a brand new run that’s even higher, and as a bonus we could add snow, which also turns out to be a huge appeal. People do love it when they have guaranteed powder.