Guided Capstone Project Report

My recommendation for Big Mountain Resort is that they increase their ticket price for adults on weekends from $81.00 to $88.35. To reach this conclusion, I created a model that was trained on a dataset that had information on various attributes (prices, skiable area, number of runs on the resort, days open, etc..) of 330 ski resorts across the United States. In order to solve the problem of increasing revenue to make up for the cost of the additional ski lift, I chose to focus on price to see if the model would predict that changes in price made sense. After the model was trained (with an explained variance of 93%), I used it to predict what the Adult Weekend prices should be for Big Mountain resort, and the value of $88.35 was reached. I also wanted to see what other factors should be changed for Big Mountain Resort to accompany a price increase, so I checked coefficient values for each attribute in terms of its effect on Adult Weekend prices for all of the resorts, and here are the top features:

Figure One:

	Coefficient
AdultWeekday	19.955002
vertical_drop	1.630142
Runs	1.616836
quad	1.524369
averageSnowfall	1.519949
triple	1.447769
surface	1.244229
daysOpenLastYear	1.052617

Of these variables, “Runs” and “daysOpenLastYear” seemed to be the most controllable, so I plotted linear regressions of those variables against the adult weekend prices:

Figure Two:

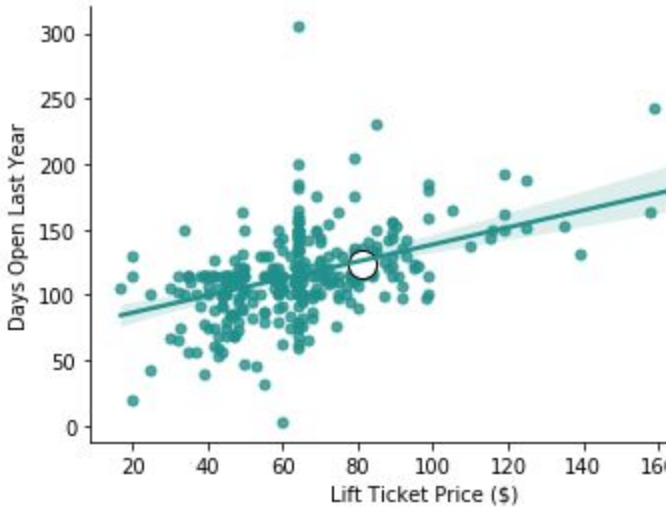
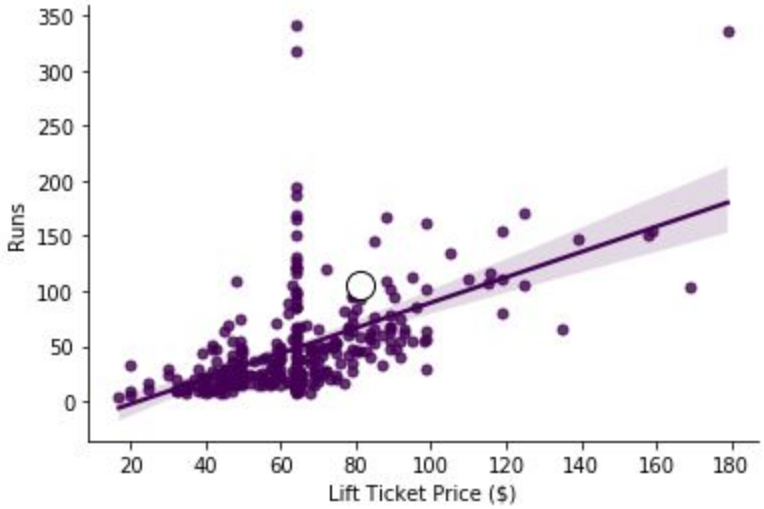


Figure Three:



Big Mountain Resort kept their resort open for the appropriate number of days last year to be in line with a price of $88.35, but I would recommend that the number of runs, if possible, could be increased to around 100.