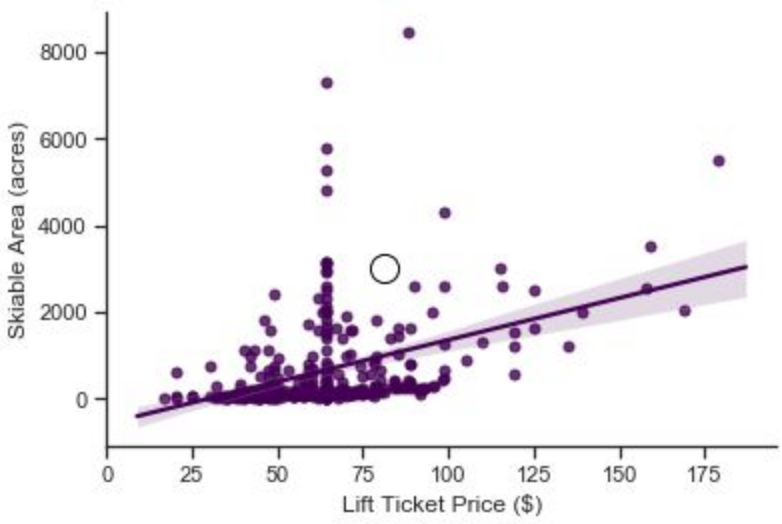
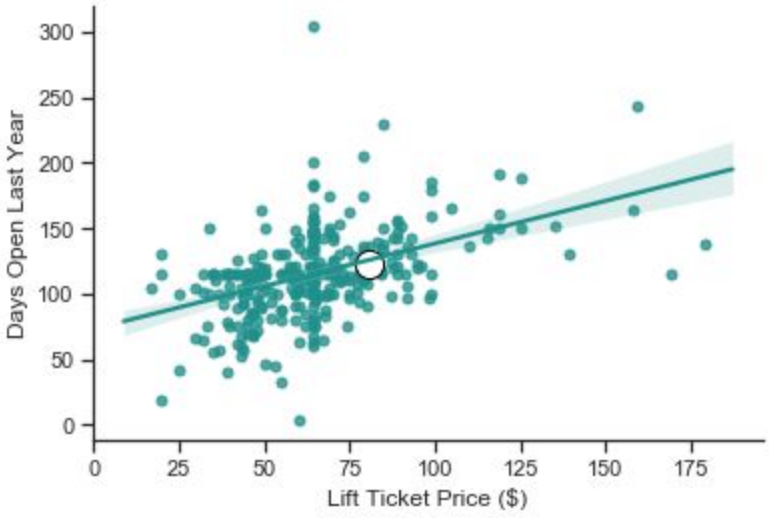
The goal of this guided capstone was to provide Big Mountain Resort recommendations on how they can recoup the increased operating costs from installing a new chair lift at their resorts. The investors at Big Mountain Resort also wanted their profit margins to remain at the current percentage of 9.2% Lastly, Big Mountain Resort wants to know the expected revenue of the current year if they implement the recommendations that they were given. The recommendation that will be given to Big Mountain Resort will prove to be a successful one if the recommendation will help Big Mountain Resort maintain their profit margin of 9.2% while decreasing/recouping their operation costs. The best model that was used to figure out what the most useful recommendation for Big Mountain was the model with the variables Name, state, summit_elev, and base_elev. The reason why these variables were dropped in the best model was Name doesn't contribute to the model because it's a categorical variable and that's the same situation for the state of the resort; summit_elev and base_elev were also dropped because of their high correlation. These graphs I created in the Jupyter notebook shows the correlation of Ticket Prices with Days Open Last year and the skiable area. The first graph shows that as the acres of skiable area increase the price the ski resort charges for a lift also increases; the second scatter plot similar to the first plot also shows as the number of days opened last year of a ski resort increases the price they charge for a lift ticket also increases.





The expected price to present to management based on my model given Big Mountains characteristics of their resort in comparison to other ski resorts was higher than the current Big Mountain price. Big Mountain Resort charges $81 for adult weekend tickets but from the model I concluded that Big Mountain Resort should be charging $88.77 for adult weekend tickets. With this recommendation Big Mountain Resort will be able to maintain their profit margin while decreasing/recouping their operating costs.