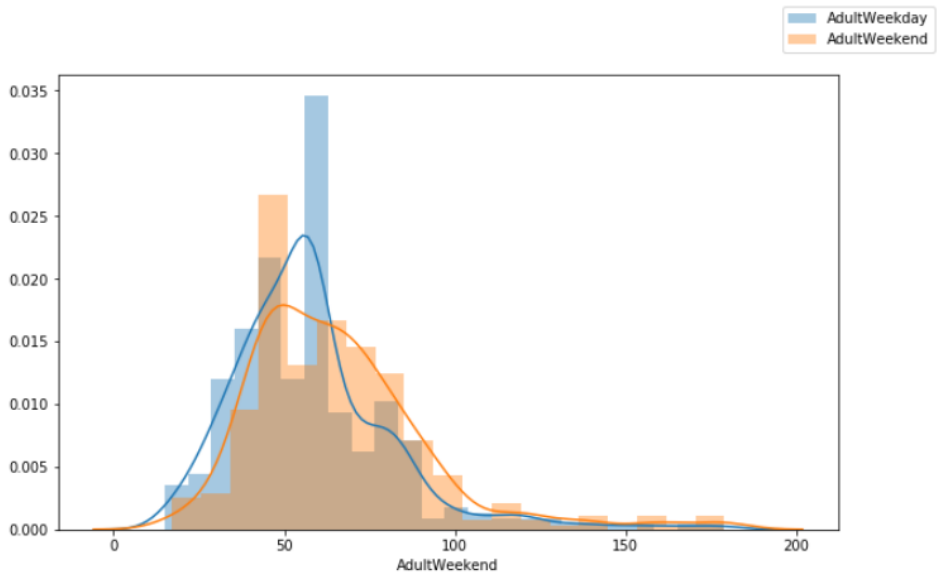
Big Mountain Resort Project Report

Big Mountain Resort is located in northwestern Montana. Its business profit margin is 9.2% and the investors would like to keep it there. Recently, Big Mountain Resort installed an additional chair lift, which increases their operating costs by $1,540,000 this season. In order to satisfy the investors and keep the profit margin at the original percentage, Big Mountain Resort would like to see if it is possible to raise the ticket price and cover the cost.

In this project, I received the data source from the Database Manager. This database contains information from 330 resorts in the US that can be considered part of the same market share. I will use this data to find some insights and give advice on the ticket price.

This dataset contains 27 features including the name and regional location of the resorts, and their summit_elev, vertical_drop, number of fast chairs, years opening, etc. After cleaning the data, I started to explore the data.

From the following graph, we can see that the shapes of AdultWeekend and AdultWeekday are identical. However, the AdultWeekend is shifted to the right of the AdultWeekday, meaning that the price for the weekend is a little higher than that of the weekday. For Big Mountain Resort, the price is the same for both the weekday and the weekend ($30 per adult). It is reasonable to consider that the Big Mountain Resort could raise the price on the weekend.



Then I built 3 models to predict the weekend ticket price for all resorts. I would like to see what factors influence the ticket price, and how other resorts set their price based

on its properties. I picked the model with the lowest predicting error. This model tells us that fastSixes has the highest positive impact on the ticket price, and fastEight has the most negative impact.

	feature	coef
3	fastSixes	12.184338
4	fastQuads	9.616111
5	quad	7.719153
8	surface	7.448936
7	double	7.072432
6	triple	6.749873
18	AdultWeekday	0.635074
12	LongestRun_mi	0.307849
10	Runs	0.067996
15	daysOpenLastYear	0.039655
20	NightSkiing_ac	0.008958
0	vertical_drop	0.006626
14	Snow Making_ac	-0.000896
17	averageSnowfall	-0.002906
13	SkiableTerrain_ac	-0.005079
16	yearsOpen	-0.008664
19	projectedDaysOpen	-0.041716
11	TerrainParks	-0.716811
21	cluster	-1.358673
1	trams	-1.883421
9	total_chairs	-6.390541
2	fastEight	-55.297963

With this model, I predicted that the weekend price for Bid Mountain Resort could be as high as $39.23 based on its conditions and properties. The current price for Big Mountain Resort on Weekend is $30. Every year, there are about 350,000 people come and ski at Big Mountain Resort, and assume 50% of them come at the weekend. In order to cover the $1,540,000 operating costs, the resort could raise the weekend price by $8.8. The $38.8 ticket price is under $39.23 which is a reasonable price to set.

Other Suggestions:

1. Buying an additional device is a Capital Expenditure, so it will not be shown on the income statement. Therefore, this cost, will not have a tangible impact on the profit margin.

2. No information about the current utilization rate of the chair lift and the average waiting time per customer. This could also be an important indicator of the price.
3. Increasing prices could lead to decreasing demand. It is still possible that the increase in price cannot cover the cost due to reducing customer numbers.
4. We should calculate the return on investment of the asset purchase (an additional chair lift), and convince the investor that this investment will lead to a long term gain.