Guided Capstone Project Report

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Here I will summarize my findings and recommendations for Big Mountain Resort:

The goal of this project was to figure out a pricing model for ski resorts ticket pricing, to see if Big Mountain resort was maximizing its returns, what facilities people are willing to pay, and pay the most for, and build a model to guide Big Mountain’s pricing and future investment plans.

Currently, the ticket price at Big Mountain is $81, for both weekdays and weekends. In the model we used to calculate the expected Big Mountain ticket price in relation to the ticket prices of other resorts, it gave us $95.87. Even with our mean absolute error of $10.39, there’s still room for increase. When looking at data compared to other resorts in Montana, Big Mountain is on the higher percentage of offerings of facilities and resources; They’re very high up in snow making area, among the highest in total number of chairs, the upper league of fast quads and overall number of runs, as well as one of the longest runs and largest amount of skiable terrain.

Using our model and this data, we looked at the four possible options listed for figuring out the answer to our question. In our first scenario, permanently closing 10 runs, we found that closing 10 runs would lead to a large drop of ticket price and revenue. In our second scenario, increasing the vertical drop, installing an additional chair lift, and adding additional snow coverage, we found that this scenario increases support for ticket price by $1.99, which could amount to $3,474,638 over the season.

Scenario 3, which is the same as scenario 2 but with an added 2 acres of snow making cover, seemed to make no difference. Finally with scenario 4, increasing the longest run by .2 miles and adding 4 acres of snow making capability, also made no difference. In our random forest model, we found the longest run way down in the feature importance list.

In summary, looking at the Big Mountain’s room to increase ticket price, it’s place in the market, as well as the modeling outcome of the above scenarios, we believe that big mountain should invest in scenario 2.