

## Summary of Findings

After reviewing the data of ski resorts in Big Mountain Resort's market share, a model was produced to predict Adult Weekend Ticket price based on a resort's facilities. This model predicted that Big Mountain Resort's new addition of a \$1.54 M ski lift warrants an increase in their ticket price. This model was also used to see how the shortlisted changes Big Mountain Resort is considering to see what effect they have on ticket price and will be provided to model future facility changes.

## Current Market

Analyzing the data showed the following resort attributes had the most effect on ticket price, and how Big Mountain Resort currently ranks in the market space for these parameters :

Feature Description	Big Mountain Resort Percentile
Vertical change in elevation from summit to base	89.89
Total area covered by snow making machines in acres	84.47
Sum of all chairlifts at the resort	95.3
The number of fast four person chairs	95.3
Count of the number of runs on the resort	92.4
Length of the longest run in the resort in miles	94.2
The number of trams	95.05
Total skiable area in square acres	97.83
Adult Weekend Ticket Price	81.58

It is evident that Big Mountain Resort ranks at the 90th percentile or above for most of these attributes, however when looking at the adult ticket price this resort is only at the 80th percentile. Intuitively, this should warrant a ticket price increase and this agrees with the model produced.

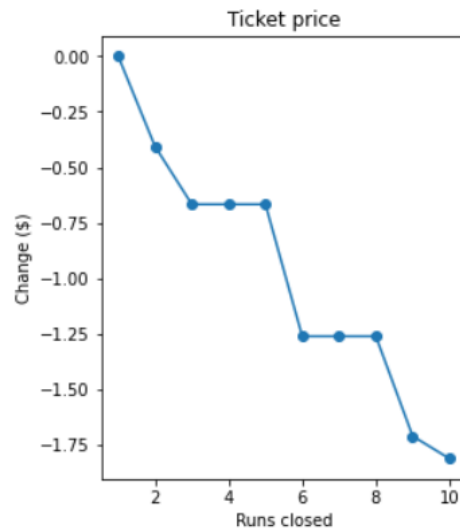
## Model Results

After training the model on the provided ski resorts in Big Mountain Resort's market , it predicted that with the addition of its new ski lift Big Mountain should charge \$95.87 per Adult Weekend tickets, an increase of \$14.87. It should be noted though that the average error in predictions produced by the model is \$10.39, so the increase warranted could be anywhere between \$4.49 - \$14.87. The model also assumes that all other ski resorts in the market are all accurately priced, so some caution should be considered when deciding on an increase moving forward.

## Analysis of Proposed Changes

Big Mountain resort provided a list of proposed changes that they are considering, and how these changes would affect the modeled ticket price. Below are the predicted results of each provided proposal.

### Closing up to 10 ski runs:



When considering closing routes, the more routes closed will result in a lower ticket price, up to a decrease of almost \$2 when 10 routes are closed. However, closing one route will not result in any loss in ticket price, so it is recommended Big Mountain close one to reduce its expenses.

### Increase Vertical Drop by adding a Run and corresponding Ski Lift:

Adding an additional route and corresponding ski lift to increase vertical drop of Big Mountain Resort would warrant an increase of ticket price by \$1.99. However, as Big Mountain just installed a ski lift and each costs roughly \$1.54 M, another may not be warranted. The profit gained here would require 350k Adult Tickets sold per year for a little over 2 years to cover the cost of one ski lift. This business plan may not fit into Big Mountain's market strategy.

### Increase Vertical Drop by adding a Run and Ski Lift. with Increase of Produced Snow:

Results were the same as the previous proposal, despite an increase in produced snow.

### Increase longest Run Length and Snow Production

Lengthening the longest run by .2 miles and guaranteeing its snow coverage by adding 4 acres of snow making capability had no effect on ticket price whatsoever. If this could be produced cheaply, and advertised well it could result in short term gains, but it is not an effective long term strategy for ticket pricing.

## **Conclusion**

Summarizing the results described in detail above, the model produced predicts Big Mountain Resort's facilities warrants a price increase of \$4.49 - \$14.87, with some risk involved by assuming every other mountain resort is currently accurately priced. Of the changes suggested by Big Mountain, none will warrant an increase in ticket price, though closing a route could reduce expenses without affecting the projected price. This model will be provided to management so that they can see how further proposed changes will change the modeled Adult Ticket price.