

Recommendations for Big Mountain Resort

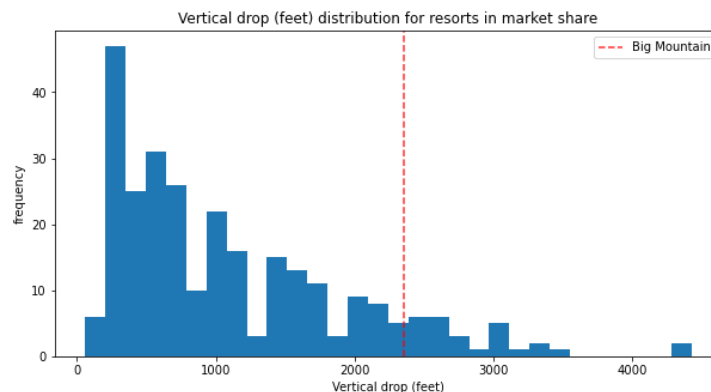
We developed a model based on ski resorts' features and facilities to predict ski ticket prices based on how much people value certain facilities within a resort. Using the model, we then gained insights into what Big Mountain's ticket price could/should be, and how it might change under various scenarios. Big Mountain currently charges **\$81.00** for an adult weekend ticket. According to our model (random forest) and considering the Big Mountain's facilities, a **~ \$96.00** ticket price could be supported in the marketplace for this resort. With the expected mean absolute error of \$10.39, this suggests there is still room for an increase in ticket price given an existing feature or future facility supports the increase in the ticket price. Modeling showed that the following features are important to have in a ski resort and could support a higher ticket price:

- vertical_drop
- Snow Making_ac
- total_chairs
- fastQuads
- Runs
- LongestRun_mi
- trams
- SkiableTerrain_ac

Let's look at how Big Mountain Resort compares to other resorts for a few of these features.

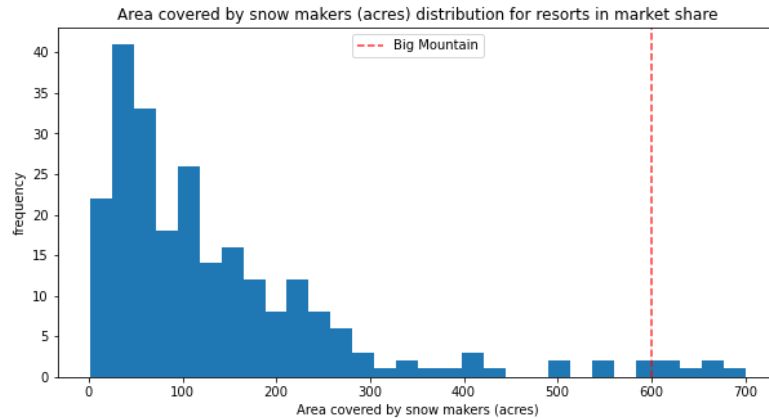
Vertical drop

As shown in Figure below, Big Mountain is doing well for the vertical drop, however, there are still quite a few resorts with a greater drop.



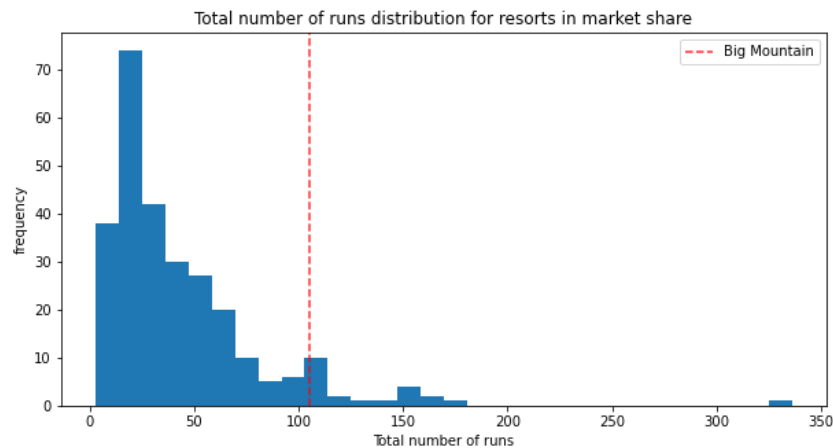
Snowmaking area

Big Mountain is very high up in terms of snowmaking area, a feature that is very appreciated by visitors.



Runs

Big Mountain compares very well for the number of runs.



Big Mountain Resort has considered the following potential scenarios for either cutting costs or increasing revenue:

- Permanently closing down up to 10 of the least used runs. This doesn't impact any other resort statistics.
- Increase the vertical drop by adding a run to a point 150 feet lower down but requiring the installation of an additional chair lift to bring skiers back up, without additional snow making coverage
- Same as number 2, but adding 2 acres of snow making cover
- Increase the longest run by 0.2 mile to boast 3.5 miles length, requiring an additional snow making coverage of 4 acres

Based on Scenario 1, the resort can close one run with no effect on ticket price and revenue. Closing 2 and 3 runs successively reduces support for the ticket price. If Big Mountain decides to close down 3 runs, they can safely close down up to 5 with no further loss in the ticket price. Scenario 2 is the one we recommend for the resort to consider since they have already invested in the additional lift. This scenario increases support for ticket price by ~ \$2.00 (on the basis of each visitor on average buying 5-day tickets, 350,000 visitors per season). Over the course of the season, this is expected to result in a \$3,474,638 revenue, which is well over the operating cost of the additional chair lift (\$1,540,000 for this season).