

## Guided Capstone Project Report

We have generated a series of models assessing the various resort features and facilities of every other resort as it compares to Big Mountain Resort. In terms of facilities our Random Forest models have deemed to be of greater significance as it relates to ticket prices--we have seen that Big Mountain generally tends to exceed the majority. These were tested in adult weekend ticket price (nationally and across Montana), vertical drop, snow making area, total number of chairs, number of fast quads, number of runs, length of longest run, number of trams, and skiable terrain area.

Following, we have tested a series of scenarios to model predicted ticket prices (based on 'market' indications) if Big Mountain Resort were to execute one of the following options: First, permanently close between 10 of the least-used runs. Second, 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. Third, repeat the second option, but add 2 acres of snow-making cover. Or fourth, extend the longest run by 0.2 mile to boast a 3.5 mile length, requiring an additional snow making coverage of 4 acres.

Now, the first scenario indicates that closing one run would make no difference. Closing 2 and 3 successively reduces support for ticket price and so revenue. If Big Mountain closes down 3 runs, it seems they may as well close down 4 or 5 as there's no further loss in ticket price. Increasing the closures down to 6 or more leads to a large drop. The second scenario increases support for ticket price by \$16.43, and the third--for \$18.69. And the fourth scenario offers no indication for increase.

While the data offers limited insight (for example, we possess no knowledge pertaining to operating costs), these models endorse the idea to increase the resort's vertical drop, install an additional lift, and adding two acres of snow making. Such changes, again--without regard to operating costs--are projected to warrant a significant increase in ticket prices, thus increasing our returns.