How much are customers willing to pay for a day at Big Mountain Resort?

In-depth analysis of detailed market research shows how Big Mountain Resort truly stacks up against the competition.

The data show which aspects of 330 American ski resorts correlate most with ticket price. This can predict the best current ticket price for Black Mountain Resort and recommend potential changes which would justify further profitability.

Optional changes to increase profitability

1) Big Mountain Resort is very likely to **increase revenue by simply increasing the ticket price by $4.00 and making no other changes.**
2) **An increased ticket price of $8.61 can be justified by adding one run, one chair lift, and 150 feet of vertical drop.**
3) An increased ticket price of **$9.90** can be justified by including **two acres of snow-making coverage** along with all the other actions in Option 2. Simply adding more snow-making coverage without any other changes would not justify a price increase.
4) If Big Mountain Resort prefers to reduce operational costs rather than increase ticket prices, it can **close up to six runs for only a $0.60 price decrease per ticket**. Also, **a one-run closure is predicted to have no effect at all on the ticket price.**

There is no predicted change in the number of tickets sold for any of these options.

What does the data say?

Ski states summary PCA, 77.2% variance explained
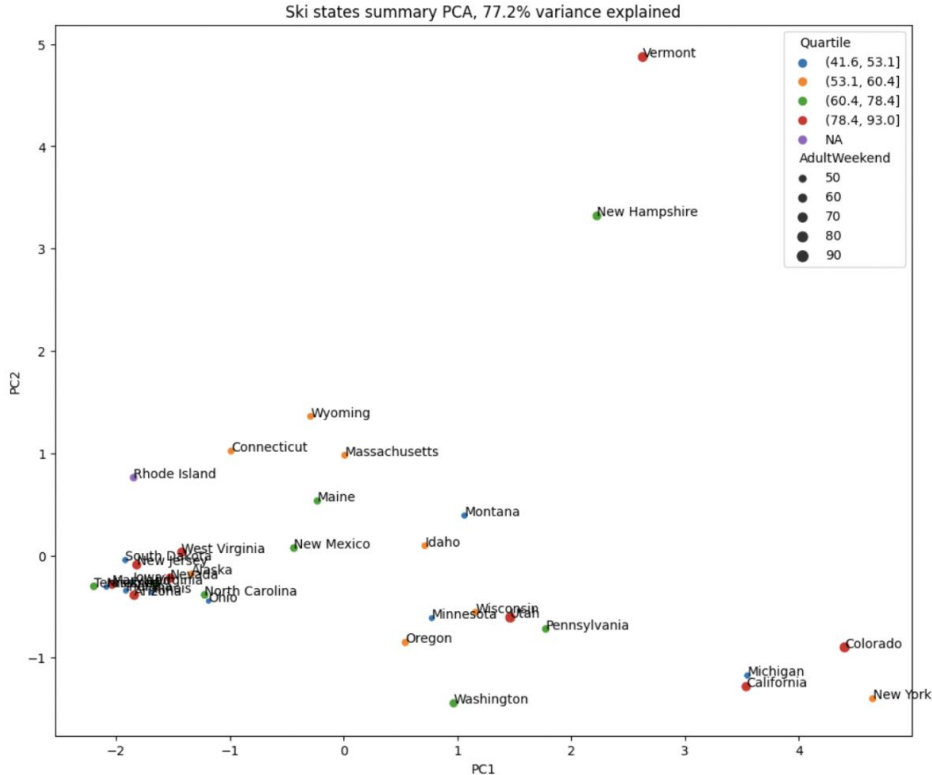
This PCA plot shows that ski resorts in Montana are similar to those in other states which charge more for tickets, so there is reason to believe Big Mountain Resort can increase its prices.

What does the data say?

Best random forest regressor feature importances
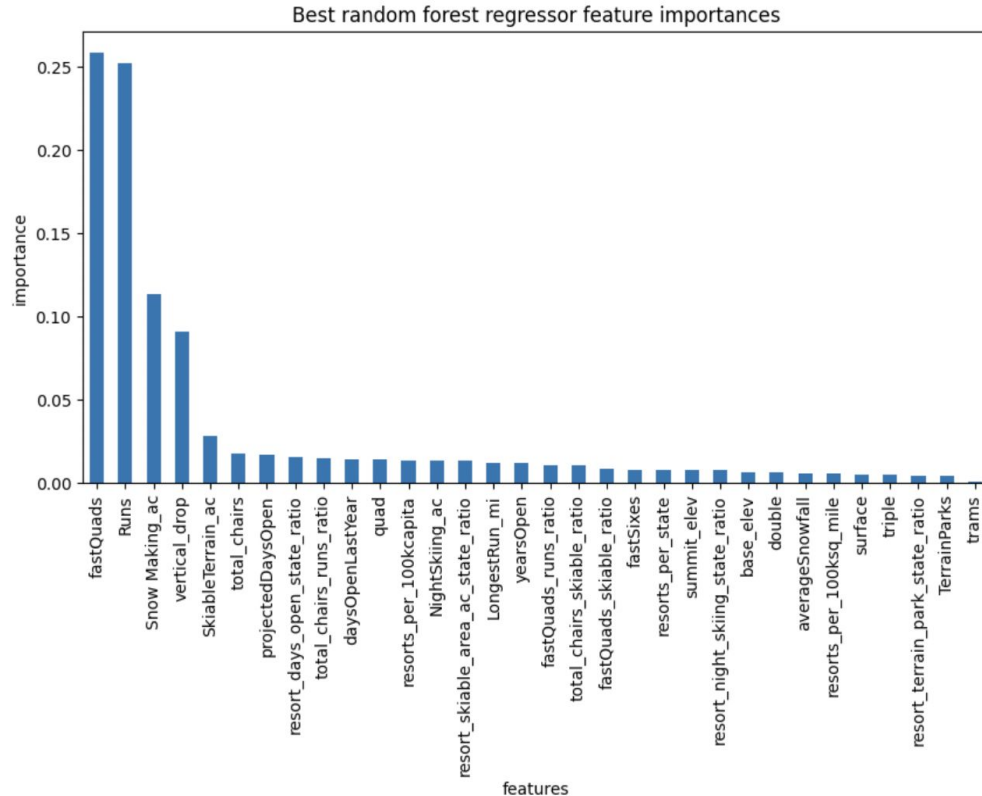
A random forest model which accurately predicts the true price for a ticket at any of the 330 ski resorts in America within $9 shows that the most important features are the number of fast quad lifts, the number of runs, the snow-making coverage, and the vertical drop. But how do these factors come together for Big Mountain?

What does the data say?

The data show Big Mountain Resort is already under charging for its amenities.

Given market trends, the model predicts that Big Mountain Resort tickets should cost $95.00. Including the fact that the model is not perfect and in general has accuracy within $9, there is still a gap between what Big Mountain charges and what people are willing to pay. $81 + $9 = $90

Customers are willing to pay at least $4.00 more for a ticket to Big Mountain!

What does the data say?
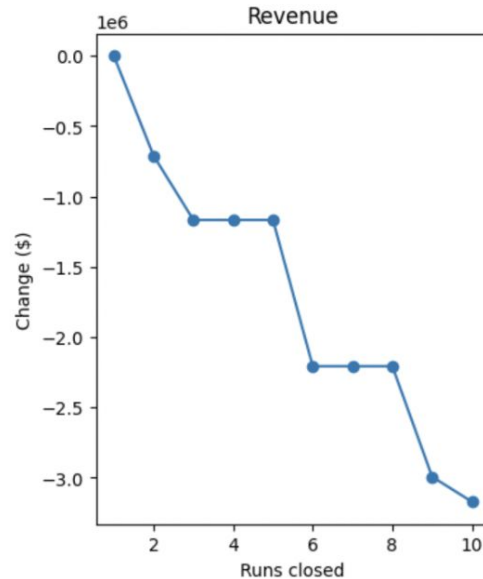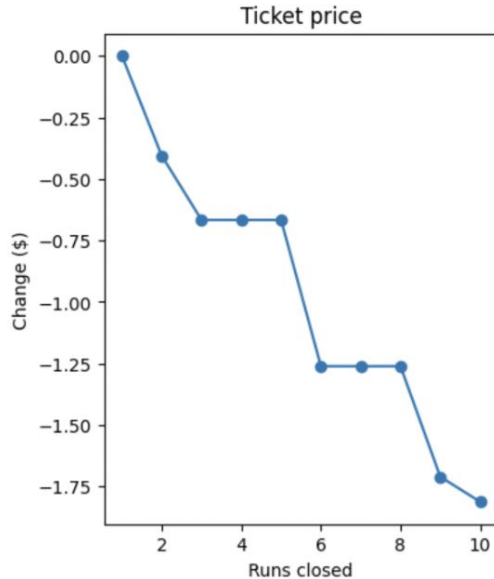
Given this market research data, Big Mountain is predicted to be able to close one run with no decrease in ticket value, and up to 6 runs with very little decrease.

Summary

Big Mountain Resort has multiple ways to increase its profitability. The simplest is to simply **increase the price of its Adult tickets by $4.00**. There is no predicted reduction of tickets sold with this strategy. **This would result in about $7.5 million in increased revenue for free!**

The data used to make this prediction was thorough and double-checked for accuracy and completeness.

Further options can be explored within the model, and the model can be improved with introduction of customer demographic data at ski resorts across America.