

Background

The purpose of this data science project is to come up with a pricing model for ski resort tickets in our market segment. Big Mountain suspects it may not be maximizing its returns, relative to its position in the market. It also does not have a strong sense of what facilities matter most to visitors, particularly which ones they're most likely to pay more for. This project aims to build a predictive model for ticket prices based on a number of facilities, or properties, boasted by resorts (*at the resorts*). This model will be used to provide guidance for Big Mountain's pricing and future facility investment plans.

Findings:

The model says closing one run makes 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 the ticket price. Increasing the closures down to 6 or more leads to a large drop.

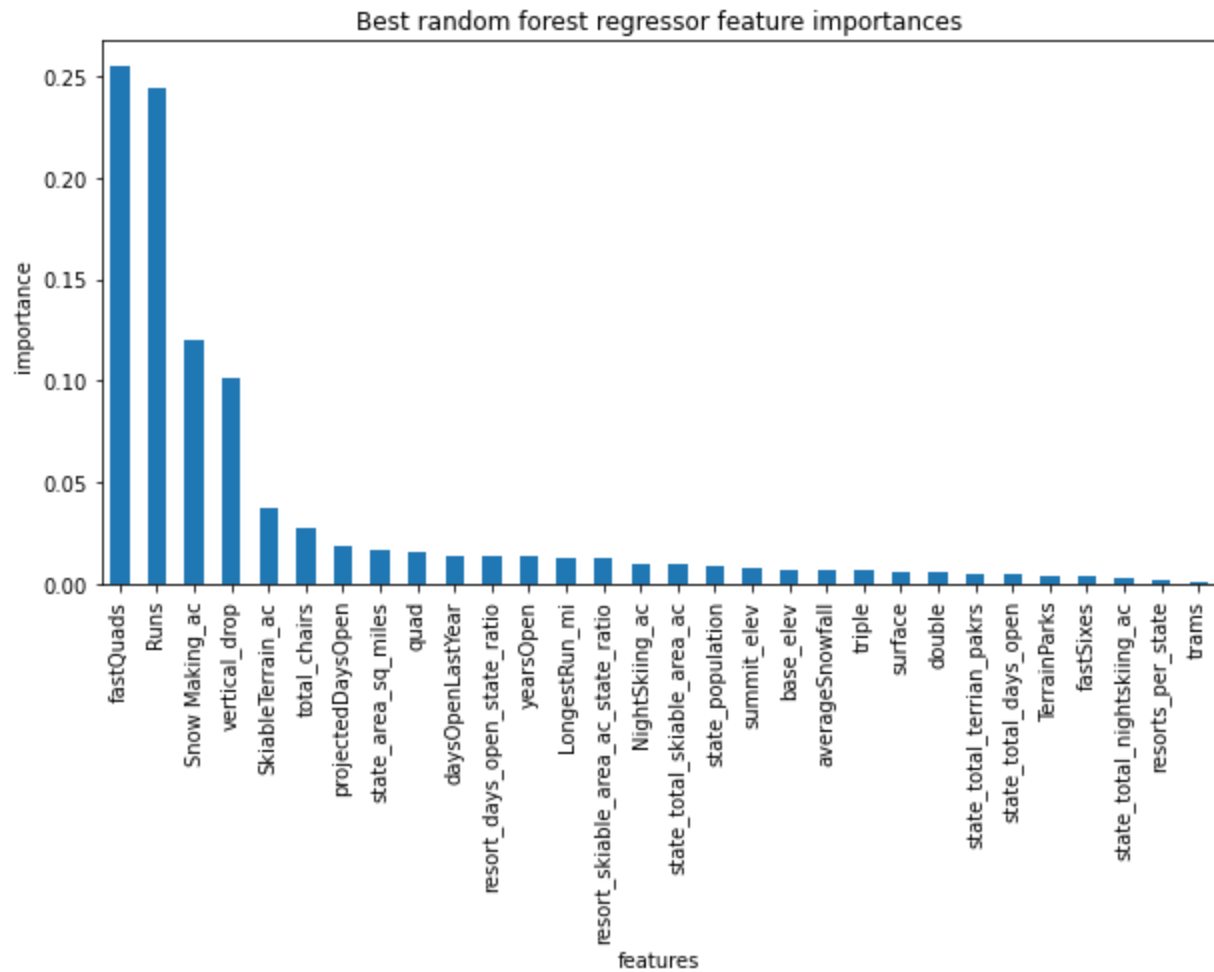
If Big Mountain adds a run and increases vertical drop by 150 ft: This scenario increases support for ticket price by \$0.69. Over the season, this could be expected to amount to \$1,209,763.

If Big Mountain makes more snow, there is no difference.

If Big Mountain increases its longest run, there is no difference in the model that supports increasing ticket pricing.

Recommendations:

Big Mountain should not close down any runs and increase its vertical drop. The following is the random forest model for features listed by their importance to support increased ticket purchase.



Modeling:

The following are figures showing the different scenarios and outcomes for comparison among other ski resorts.

