

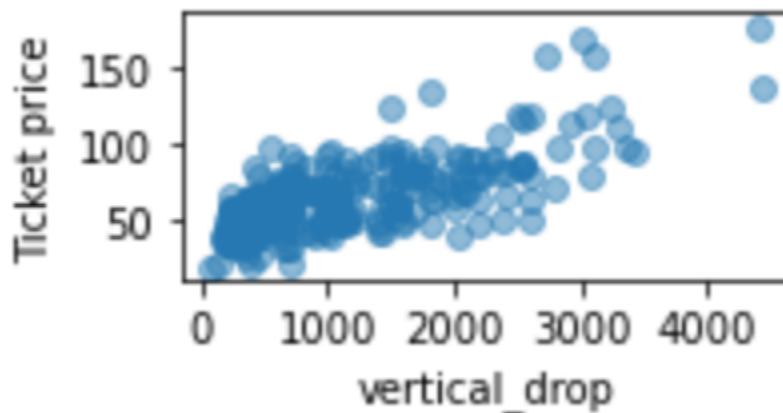
Summary

Big Mountain currently charges \$81 per ticket and it wants to firstly assess whether this price matches the expected market price given the resort's facilities, and secondly assess potential impact on the ticket price if certain changes are made in the resort. Initial analyses were conducted on other resorts to identified properties/amenities that most strongly correlated with ticket price. Then, a random forest generator model was trained on these other resorts and used to calculate an appropriate ticket price for Big Mountain given its properties/amenities.

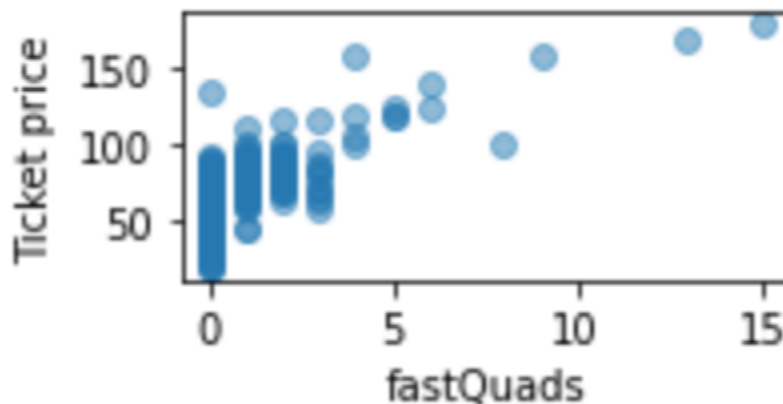
Findings

The first observation was that there was no evidence for a clustering in terms of price tickets based on location. Therefore, information from all unique and complete entries from the database was used for the subsequent modeling. Before the model was trained, the following biggest impactors (properties/attributes with the strongest correlation) on ticket prices were identified:

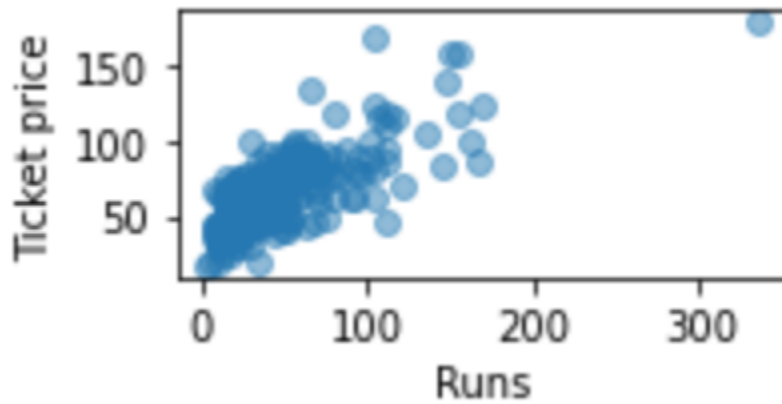
1. Size of the vertical drop



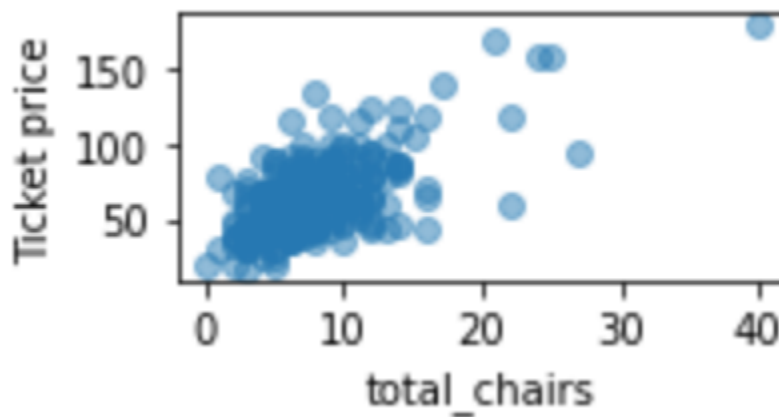
2. Number of fast quads



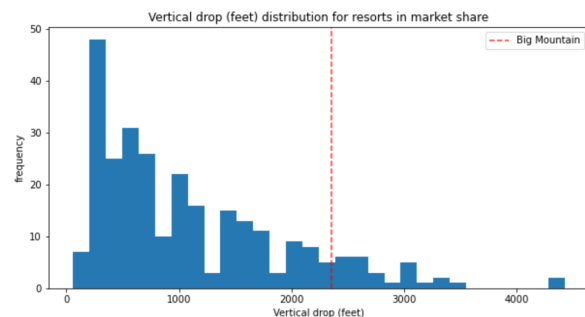
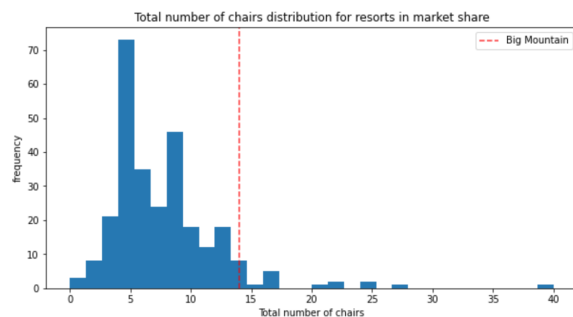
3. Number of runs



4. Number of chairs



By comparing these amenities at Big Mountain to those at other resorts, it was found that Big Mountain lies at the better end of the spectrum and should therefore also be capable of being on the more expensive end of resorts. The two chart below demonstrate examples of Big Mountain's competitive market share:



In fact, after training the random forest generator model on other resorts, the predicted price for Big Mountain suggested that the resort was undercharging given its competitive amenities/properties. **A correct price point, based on the model, has been identified to be \$89 instead of \$81.**

Further Recommendations

An informed decision of the new raised ticket price of \$89 should be based on the operational cost of the new chair lift per ticket, such that these operational costs can be offsetted while still keeping Big Mountain's price ticket competitive for its facilities.

The model was also run for various cost-cutting scenarios brought forward by Big Mountain's leadership, such as closing runs. In terms of future possible improvements, the model suggests that closing upto 5 runs will not affect the price point of the tickets, but a sharp drop in revenue is noted for closing 6 runs. Another improvement scenario suggested by the company leadership was to "add a run, increase the vertical drop by 150 feet, and install an additional chair lift". This scenario allows for \$2.39 increase in ticket price, which over the season leads to an added revenue of >\$4MM. The model test of adding 2 acres of snow making, led to no added benefits in ticket price. Finally the last scenario of extending "the longest run by 0.2 miles and guaranteeing its snow coverage by adding 4 acres" also led to no added benefits.