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**Guided Capstone Project Report**

It is known that Big Mountain resort has recently been facing challenges of ticket price charges and wanting to see how it can better manage the price of the ticket as well as operating cost. Big Mountain currently charge $81 per ticket which still not meet up with their operational expenses while random forest model was implemented which suggests a $94 as a proposed ticket price.

In addition, feature importance was carried to decided on which features are most important and perhaps drop the less important ones to avoid relying only on the random forest model prediction. The features that came as the most important features are vertical\_drop, Snow Making\_ac, total\_chairs, fastQuads, Runs, LongestRun\_mi, trams, SkiableTerrain\_ac

The histogram below shows where Big mountain currently stands overall amongst all resorts for price. It is quite obvious that Big Mountain is currently undercharging.

Chart, histogram

Description automatically generated

Big mountain is doing well interms of Vertical drop, although that some resorts that still performs better

Chart, histogram

Description automatically generated

From the graph above, Big Mountain is very high in terms of snow making area

Chart, histogram

Description automatically generated

We can see that Big Mountain is among resort with the highest number of total chairs, but some resorts appear to be outliers.

Chart, line chart

Description automatically generated

In conclusion, for Big Mountain to better manage operational costs, it will be a great idea to permanently close down up to 10 of the least used runs since it doesn't impact any other resort statistics. Also, adding 2 acres of snow making cover will be a smart move.