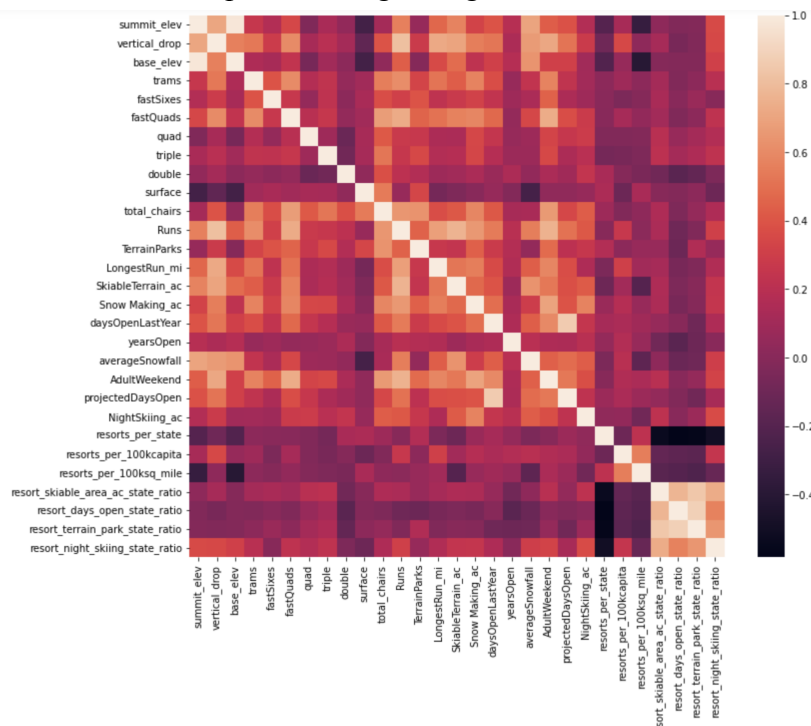


## Big Mountain Resort

Big Mountain Resort on average expects around 350,000 visitors over the season, with visitors skiing for five days. Big Mountain suspects it may have not been maximizing its profits based on its current position in the market. The resort has also been faced with deciding which features matter the most to visitors, ultimately which one's visitors would be willing to spend more on. The project's aim is to build a predictive model for a ticket price increase based on the current amenities, locations, and possible future changes.

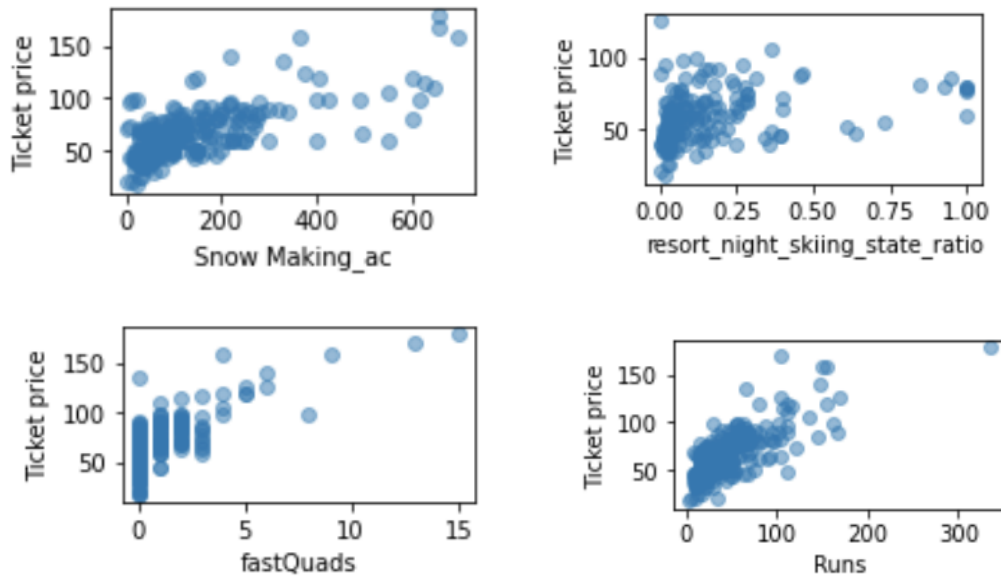
## Features

There were many features taken into account while analyzing the whole entirety of the resort. Below shows a heatmap of showing strong correlations between a few features:



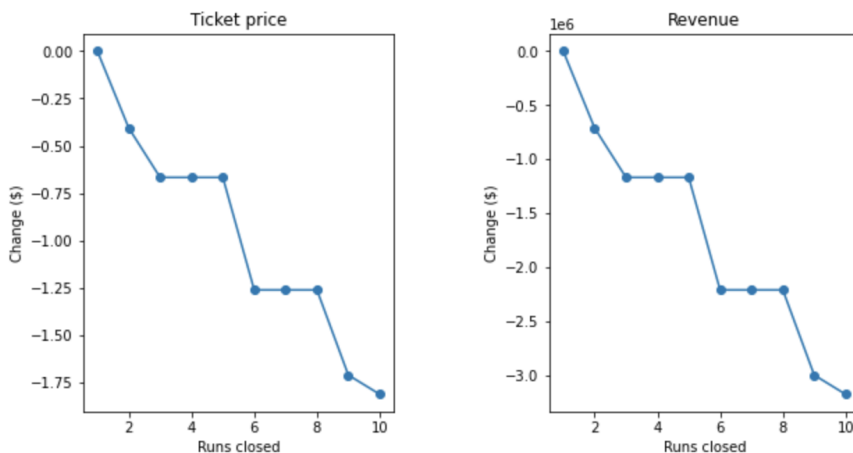
From the heatmap, a clear correlation between summit and base elevation was noted. As well as a positive trend between the ratio of night skiing areas with the number of resorts per capita.

Now to turn our focus to a few features more in depth. The figures below show additional correlations specifically: Snow\_Making\_ac, rest, Resort\_night\_skiing\_state\_ratios, fastQuads, and Runs. Snow\_Making\_ac relationship showed that visitors of resorts seem to have significant importance on more guaranteed snow. This would increase the cost of snowmaking equipment and prices. Resort\_night\_skiing\_state\_ratios showed the strongest correlation with ticket prices. This indicated any increasing share of night skiing capacity would be a positive effect for a price change.



### Model Suggestions/Improvements

The model suggested a couple of scenarios in which Big Mountain can either cut cost or increase revenue. The scenarios being closing runs, adding a run, and adding 2 acres of snow making.



The model shows closing one run has no difference on ticket price/revenue. It shows closing of 2/3 runs reduces its support to ticket prices and ultimately revenue. This trend continues throughout the chart as more runs are closed. The second scenario, Big Mountain adds a run, increasing a vertical drop, and installing an additional chair lift. This scenario supports a ticket price increase of \$1.99. This increase over the season is projected to amount to a \$3.4 million revenue. The third scenario is similar to the second but adding 2 acres of snow making. This scenario supports the \$1.99 price increase as well.