

A decorative graphic on the left side of the slide consisting of two overlapping parallelograms. The front one is blue and the back one is a light green. They are positioned diagonally, with the blue one partially covering the green one.

Guided Capstone Presentation

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Problem Identification

- Big Mountain Ski Resort in Montana wants to implement a more data-driven approach to determine ticket pricing and long-term investment strategies
- Their goal is to build a predictive model for ski resort ticket pricing using data compiled from resorts that are part of the same market share
- Dataset used to construct model includes ticket prices and amenities/resort information, such as number of trails and base elevation
- Big Mountain Ski Resort can use generated predictive model to optimize their ticket pricing relative to competing ski resorts in the market to maximize profits & facilitate long-term infrastructure investments

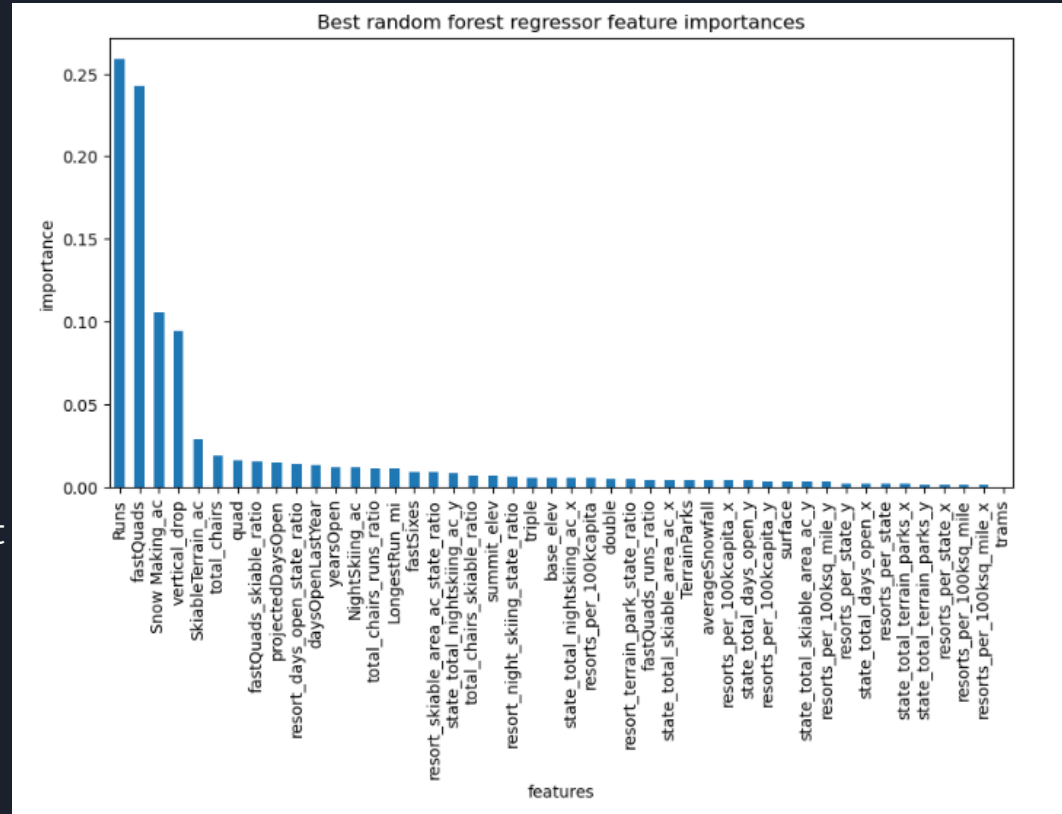


Recommendations/Key Findings

- Ticket pricing model generated using ticket pricing/facility data from ski resorts in same market indicates Big Mountain Ski Resort could charge up to \$91.36 per ticket, a \$10 increase from current ticket pricing
- Facility features found to be biggest contributors to ticket pricing when modelling were:
 - Total number of fast quad chairs at ski resort
 - Total number of runs at ski resort
 - Total acres of snowmaking done at ski resort
 - Vertical drop at ski resort
- Analysis of Big Mountain Ski Resort's facilities that are key determinants of ticket pricing shows these are on par or superior to market competition, ticket prices should be increased as model suggests

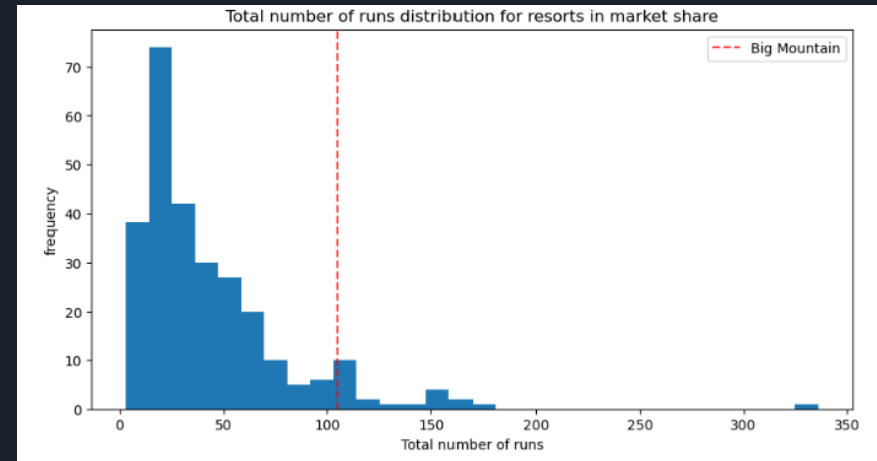
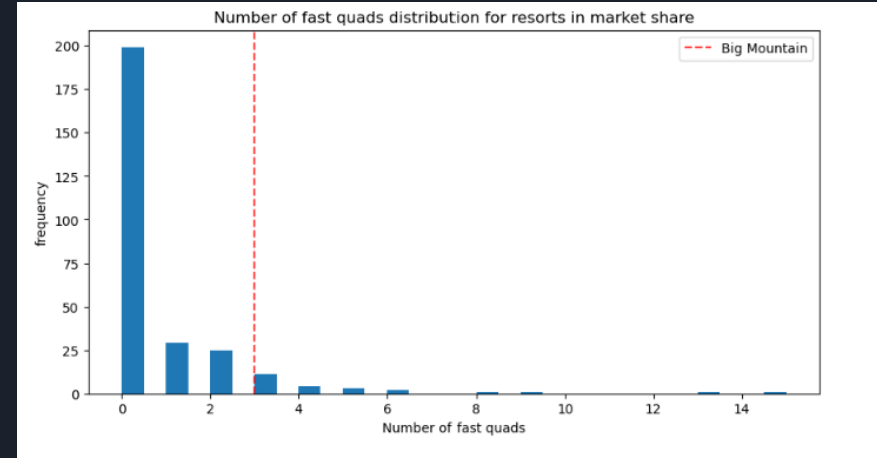
Modelling Results/Analysis

- A random forest regressor model was generated to correlate ticket pricing to resort features
- Plot at right shows resort features ranked by importance to ticket pricing model
- Total number of runs, total number of fast quad chairs, total snowmaking acres, and vertical drop were found to be the features with highest impact on ticket pricing
- Model indicates Big Mountain Ski Resort should increase ticket prices by \$10



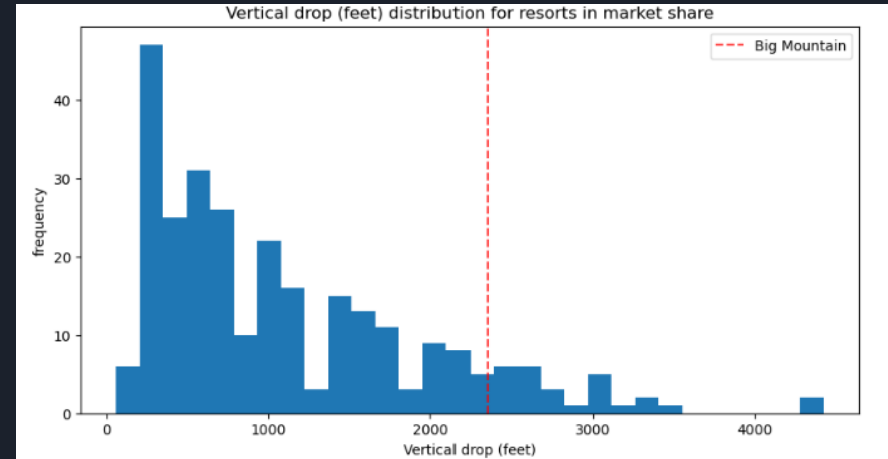
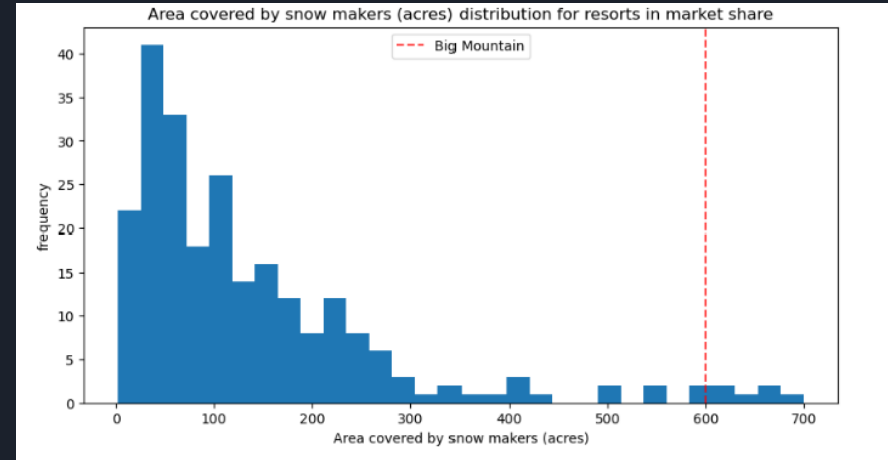
Modelling Results/Analysis

- Histograms created using all ski resorts in dataset showing total number of fast quads and total number of runs for each resort
- The redline shows where Big Mountain Ski Resort lies in each distribution
- Big Mountain Ski Resort has comparable or higher number of fast quads and runs than ski resorts in similar market share, justifying ticket price increase



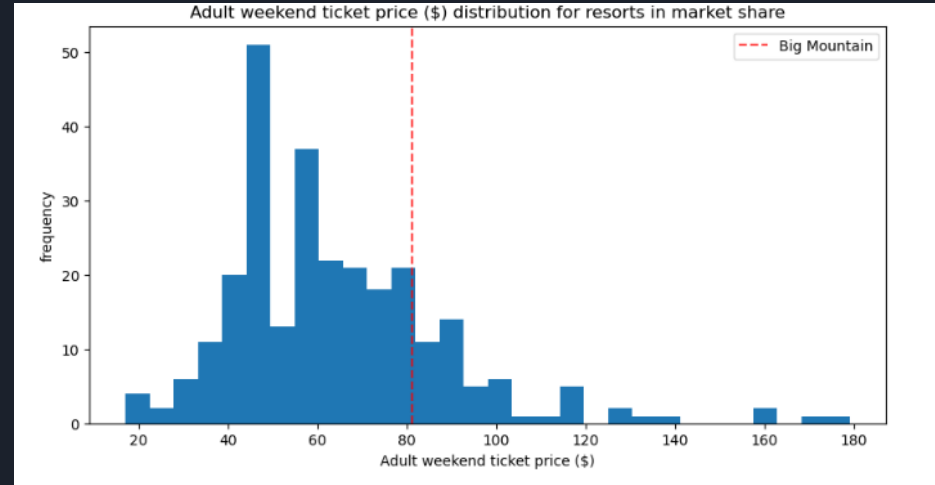
Modelling Results/Analysis

- Histograms created using all ski resorts in dataset showing total area of snowmaking and vertical drop for each resort
- The redline shows where Big Mountain Ski Resort lies in each distribution
- Big Mountain Ski Resort has more area of snowmaking and higher vertical drop than most competing ski resorts, justifying ticket price increase



Modelling Results/Analysis

- Using the data compiled from all resorts, a histogram showing Adult Weekend Ticket prices was created
- The redline indicates current ticket pricing at Big Mountain Ski Resort
- Histogram shows several competing ski resorts charge higher ticket prices than Big Mountain Ski Resort
- Previous histograms of key determinants of ticket pricing show Big Mountain Ski Resort's superiority compared with other resorts, showing a ticket price increase justified





Summary/Conclusion

- Big Mountain Ski Resort has superior facility features that are key determinants of resort ticket pricing, such as high vertical drop and snow making area, which are on par with or better than their competitors
- Ticket price modelling suggests Big Mountain Ski Resort should increase ticket price by \$10 to match competitors with similar resort amenities
- Big Mountain Ski Resort should increase ticket pricing to match competitors and generate profits, which can be invested to make infrastructure improvements to facilitate additional ticket price increases in future