Whitefish Mountain Resort, located in northwestern Montana. Big Mountain Resort offers spectacular views of Glacier National Park and Flathead National Forest. The resort originally opened in 1947 with an annual snowfall of 333 inches and 3,000 acres of skier and rider accessible terrain. Whitefish Mountain Resort offers access to 105 named trails and vast bowl and tree skiing. All these are serviced by 11 lifts, 2 T-bars and 1 magic carpet for novice skiers. The longest run is named Hellfire and is 3.3 miles in length. The base elevation is 4,464 feet, and the summit is 6,817 feet with a vertical drop of 2,353 feet. With a terrain rating of 12% beginner, 38% intermediate, 44% advanced and 6% expert, this mountain can accommodate skiers and riders of all levels and abilities.

Whitefish Mountain Resort has recently installed an additional chair lift to help increase the distribution of visitors across the mountain. This additional chair increases their operating costs by $1,540,000 this season. Every year about 350,000 people ski or snowboard at Whitefish Mountain. This business profit margin is 9.2% and the investors would like to keep it there. The business is eager to get your recommendations on recouping the increased operating costs from the new chair this season.

The model chosen to predict the Adult Weekend Price is using the follow columns from the dataset: 'vertical\_drop', 'trams', 'fastEight', 'fastSixes', 'fastQuads', 'quad', 'triple', 'double', 'surface', 'total\_chairs', 'Runs', 'TerrainParks', 'LongestRun\_mi', 'SkiableTerrain\_ac', 'Snow Making\_ac', 'daysOpenLastYear', 'yearsOpen', 'averageSnowfall', 'AdultWeekday', 'AdultWeekend', 'projectedDaysOpen', 'NightSkiing\_ac', 'clusters'. The below graph shows Whitefish Mountain Resort (black dot) with respect to other resorts.

A close up of a piece of paper

Description automatically generated

Based on the model, the recommended price for Adult Weekend is 76 dollars, compared to the current 81 dollars. The reduced price tag should attract more people to visit the resort. The extra profit should offset the operating costs increase and maintain profit margin at 9.2%.