Big Mountain Resort

Increasing Revenue by Expanding Features

The Problem

Company

Big Mountain Resort (BMR, hereafter), a Montana ski resort, has access to 105 trails and is surrounded by Glacier National Park and Flathead National Forest.

- The mountain accommodates riders of all abilities.

Context

- BMR installed an additional chair lift; this increased operating costs by 1,540,000 this season.

- To make up for the additional costs, BMR charges a premium above the average price of resorts in its market segment.

Problem statement

Identify opportunities to increase revenue to support increased operating costs of 1.5 million by increased price support through expanding the offerings of BMR.

Transition deep-dive

Phase 1	Phase 2	Phase 3

Identify Sources of Increased Revenue

- Use random forest regression to identify features relevant to ticket price.

Shift in Pricing Strategy

- Transition from a mean relative price, to a feature relative price.

Future Research

- Minimize potential failure by identifying pertinent missing information

Solution

Adding Features to Support Increased Ticket Prices

The following four adjustments are recommended to justify the change in price:

1. Create an additional run
2. Increase vertical drop by 150 ft
3. Snow-making increase by 2 acres
4. Add one fast quad chair lift

Justification

Identifying Features Relevant to Ticket Prices

Random forest regression as well as linear regression both returned a list of important features. The model returned vertical drop, snow making, runs, and fast quads as the most important features.
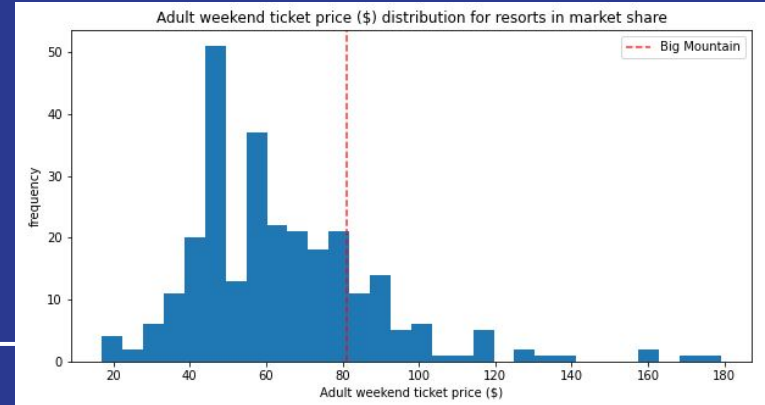

Best random forest regressor feature importances
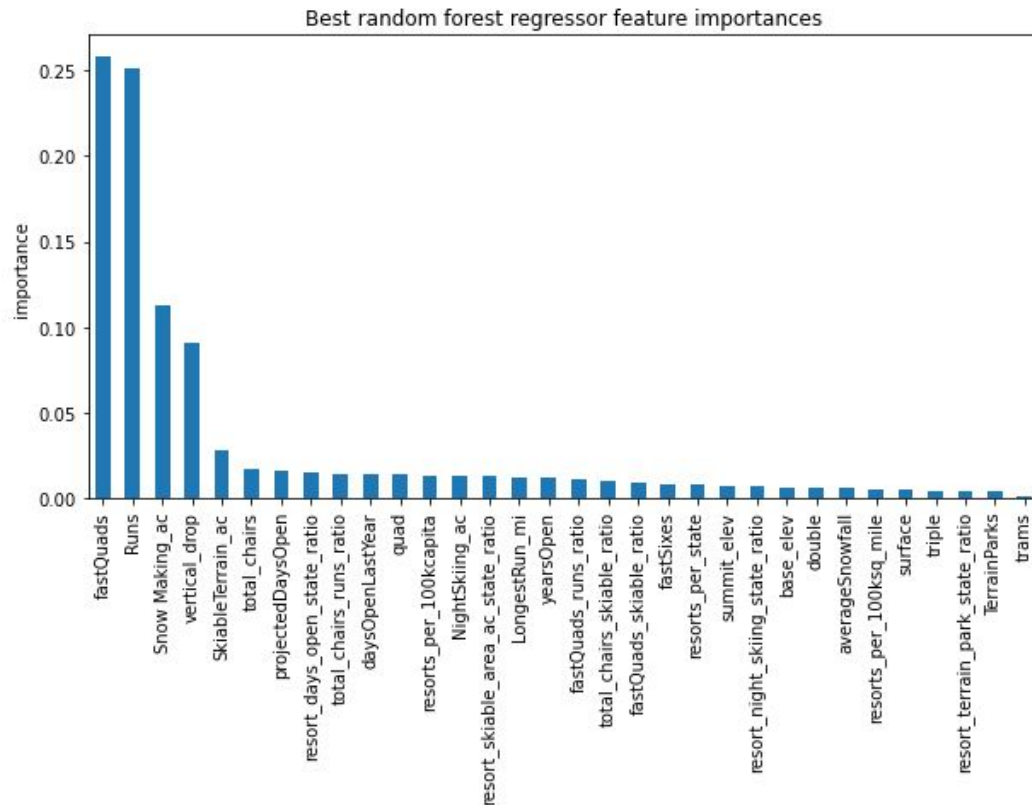
Impact

$9.90 per ticket
$17,322,717 revenue per year

Previous Price Strategy:

Comparatively, BMR priced their tickets relative to market share. Notably, BMR is already above the mean; however, changing the pricing strategy from a mean relative approximation to a forecasted price increase can accommodate increase in operational costs as well as developments.

Adult weekend ticket price ($) distribution for resorts in market share

Future Research

Identify operational and maintenance costs to proposed changes

Correlate feature changes to rise or fall in future visitor count

Gather data on yearly visitors and model prediction for prospective visitors per year