**Big Mountain Resort – Project Report**

**Motivation:**

Given the winter resort landscape, Big Mountain Resort has a variety of natural and physical features that compare favorably with its competitors around the US (Chart 1.) Despite this, it seems that our prices are behind that the level of our facilities (Chart 2). This analysis performs a systematic investigation of pricing with an extension to scenario-based pricing.

Chart, histogram

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**Chart 1**

Chart, histogram

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**Chart 2**

**Analysis and Main Results:**

With a mix of resort and state data from all around the US, we created a pricing (Weekend Adult) model for the resort and a scenario analysis tool to forecast the pricing impact of potential changes to facilities. Below is a set of resort features that we found to be important (Chart 3).

Chart, histogram

Description automatically generated

**Chart 3**

Our analysis indicates that, given the resort characteristics, an estimate for the Weekend Adult price would be $95.77 (with an average error of $10.39 on each side) vs the current price of $81.00. While we understand that this is a big jump, we would like to note that there may be other factors not captured in this analysis (such distance to airport hubs / populations centers) and could be relevant.

Another area where we feel the analysis would be useful is scenario analysis:

For instance, given a scenario where a 150ft increase of vertical drop via a new run and a new chair, could support an increase of $1.99 of Adult Weekend price. With 350,000 visitors at 5 visits per year, this would correspond to an increase of $3.47M in revenue. Compared to the $1.54M operation cost of a new chair, this scenario may merit a closer look.

**Access to Analysis and Possible Next Steps:**

We feel the scenario analysis will be useful to the management/analysts and has been made available on a web server.

The data science team will also perform data updates and calibrate the model with reasonable frequency. Please feel free to contact the data science team with any questions on the model, implementation and possible new features.