**Guided Capstone Project Report**

**1) Situation:**

Big Mountain Resort has recently installed an additional chair lift. The additional chair increases the operating costs by $1.5 million this season.

The aim of this data science project is to see:

i) If the current Resort’s facilities and features (number of runs, vertical drop, number of chairs…) can support higher ticket price?

ii) What is the effect on supported price and revenue, if we increase/decrease number of facilities?

**2) Findings:**

Based on the provided data, four most important features that support price are:  
- Number of fastQuads  
- Number of Runs  
- Area covered by Snow Making machines  
- Vertical drop

The model shows, given the facilities/features that we have, the fair price should be in the range from $85.48 to $106.26 (model price 95.87 +/- error of 10.39 (mean absolute error)).

Our Current price is $81.

**3) Recommendations**

*3.1) Increase price to $85.*

- The increase is relatively safe as $85 is lowest end of the predicted range. Based on the model, our Resort’s superior facilities (compared to those of competitors) can support this price increase.

- $4 ticket increase will lead to an increase in revenue of 5 x 350000 x 4 = $7 millions.

- Challenges: i) Our current price is already at the high end. And ii) Will price increase lead to decrease in number of visitors?

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*3.2) Add a run to increase the vertical drop by 150 feet.*

- This also requires installing an additional chair lift.

- The new features support price increase of $2 (revenue increase by $3.5 millions).

- Questions remained: how much additional operating costs for having one more run and a chair lift?