Big Mountain Resort Data Analysis Overview

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Problem Statement Worksheet (Hypothesis Formation)

What opportunities exist for Big Mountain Resort to reduce operational cost by 1.5M while maintaining or increasing lifts services through overhead rationalization, operational improvements?

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1 Context

Big Mountain Resort, a ski resort located in Montana with access to 105 trails, facilitating about 350k people yearly. Operations have recently installed an additional chair in hopes of increasing the distribution of visitors across the mountain but would cost up to $1.5M this season. Management has expressed a desire to decrease operational cost without undermining ticket prices while improving services to increase distribution of visitors across the mountain.

2 Criteria for success

New adjusted ticket pricing will be adopted and implemented for business use no later than the start of this season.

3 Scope of solution space

Applying adjusted ticket pricing to Big Mountain Resort to better understand the impact of ticket pricing on with services provided and weather conditions.

4 Constraints within solution space

-Weather conditions (snowfall per year)
-Facility maintenance

5 Stakeholders to provide key insight

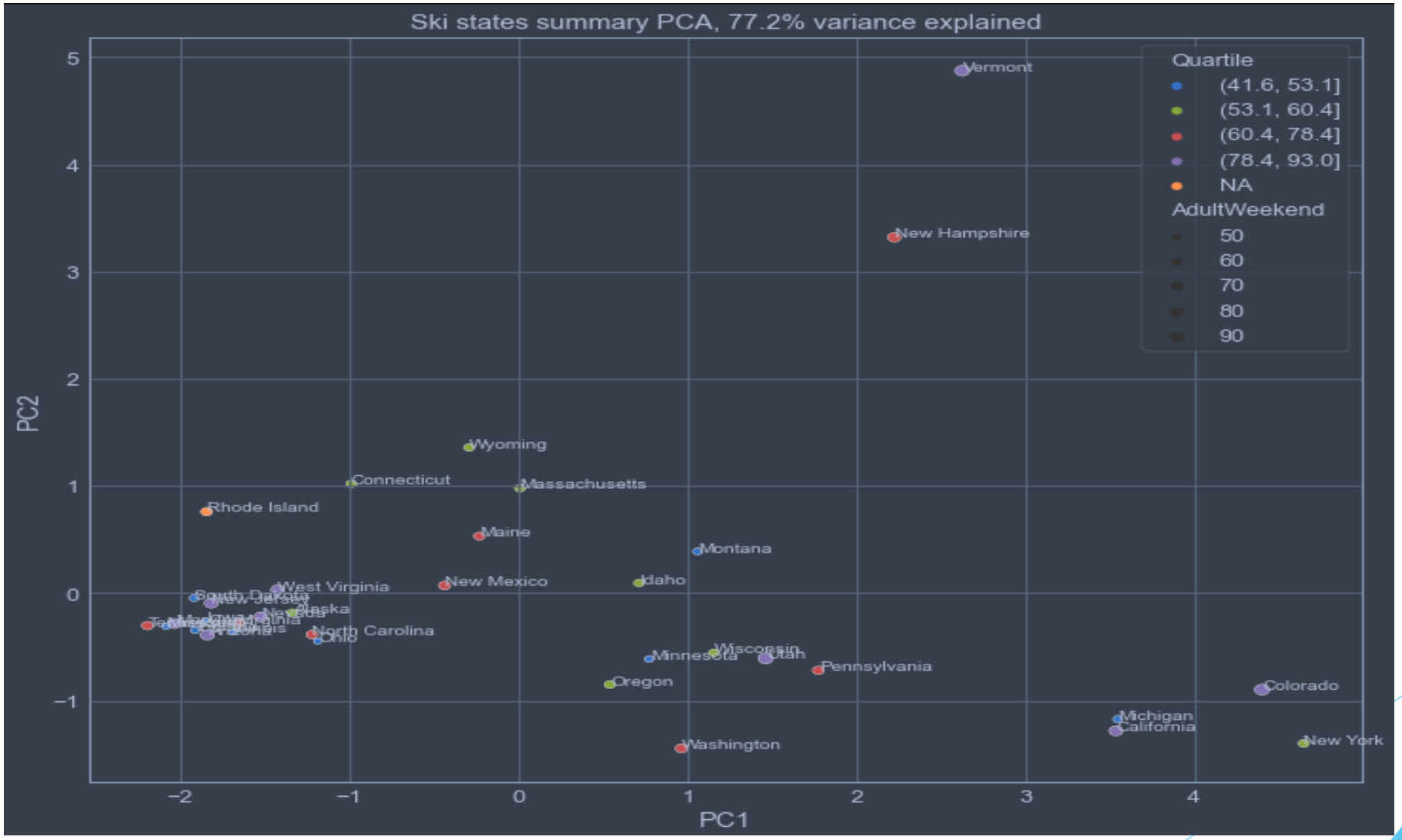
-Director of Operations: Jimmy Blackburn
-Database Manager: Alesha Eisen

6 Key data sources

Metadata file from Database Manager (single CSV)

H D E I P

Recommendations and Key Findings



Recommendations and Key Findings

- Vermont and New Hampshire seems to be in their own dimensions (Outliers)
- New York and Colorado seems related in the first dimension
  - Resorts per capita and resorts per area are significantly more important
- Summit and base elevation are highly correlated
- Fast quads, number of runs, and snow making ac are closely related to ticket pricing
- Night skiing are and number of resorts per capita showed positive correlation
- Total skiable area is not as important as are with snow making
- Total chairs is weighs more than total skiable terrain area
  - Requires good placement of chairs for efficiency
- Vertical drop seems to be a selling point that raises ticket prices

Modeling Results and Analysis

- Weekday and weekend ticket prices are identical in Montana State
  - This analysis is based of weekend ticket prices due to the higher number of missing data in weekday ticket prices
- Big Mountain Resort tops most of the league charts of facilities offered
  - This suggests the predicted modeling price is reasonable (increase from $81 to $95)
  - List of features that Big Mountain is amongst the top
    - Vertical drop
    - Snow making area
    - Total number of chairs
    - Fast quads
    - Number of runs
    - Longest run
    - Skiable terrain area

Summary and Conclusion

- These are the factors to consider for further analysis:
  - Number of runs to drop
  - Advertisements or promotions
  - Holding events or challenges
  - Course difficulty and challenges
- These are the non-factors in relation to ticket prices and revenue:
  - Vertical drop
  - Adding a run
  - Installing additional chair lift
  - Adding snow making area
  - Increasing longest run by 0.2 miles
  - Guaranteeing snow coverage