

A nighttime photograph of a ski resort village nestled at the base of a massive, snow-covered mountain. The village is illuminated by warm yellow lights from its buildings and street lamps, contrasting with the cool blue tones of the night sky and the mountain. Several buildings have signs, including one that says 'CAPITA'. The mountain in the background is rugged and covered in snow, with some rocky peaks visible. The overall scene is serene and picturesque.

BIG MOUNTAIN RESORT TICKET PRICING

● Guided Capstone Project

Chris Chung



● GOALS

- Use data to select a better value for their ticket price
- Cut costs without undermining ticket price
- Changes that will support an even higher ticket price

● RECOMMENDATIONS

KEY FINDINGS

Adult weekend ticket price: \$95.87

Will easily cover operating cost of new lift

Close down the least used run

Makes no difference in ticket price

Add a run to a point 150 feet lower down to increase vertical drop

Install an additional chair lift for skiers to access this run

Supports a ticket price increase of \$1.99

● DATA SOURCES

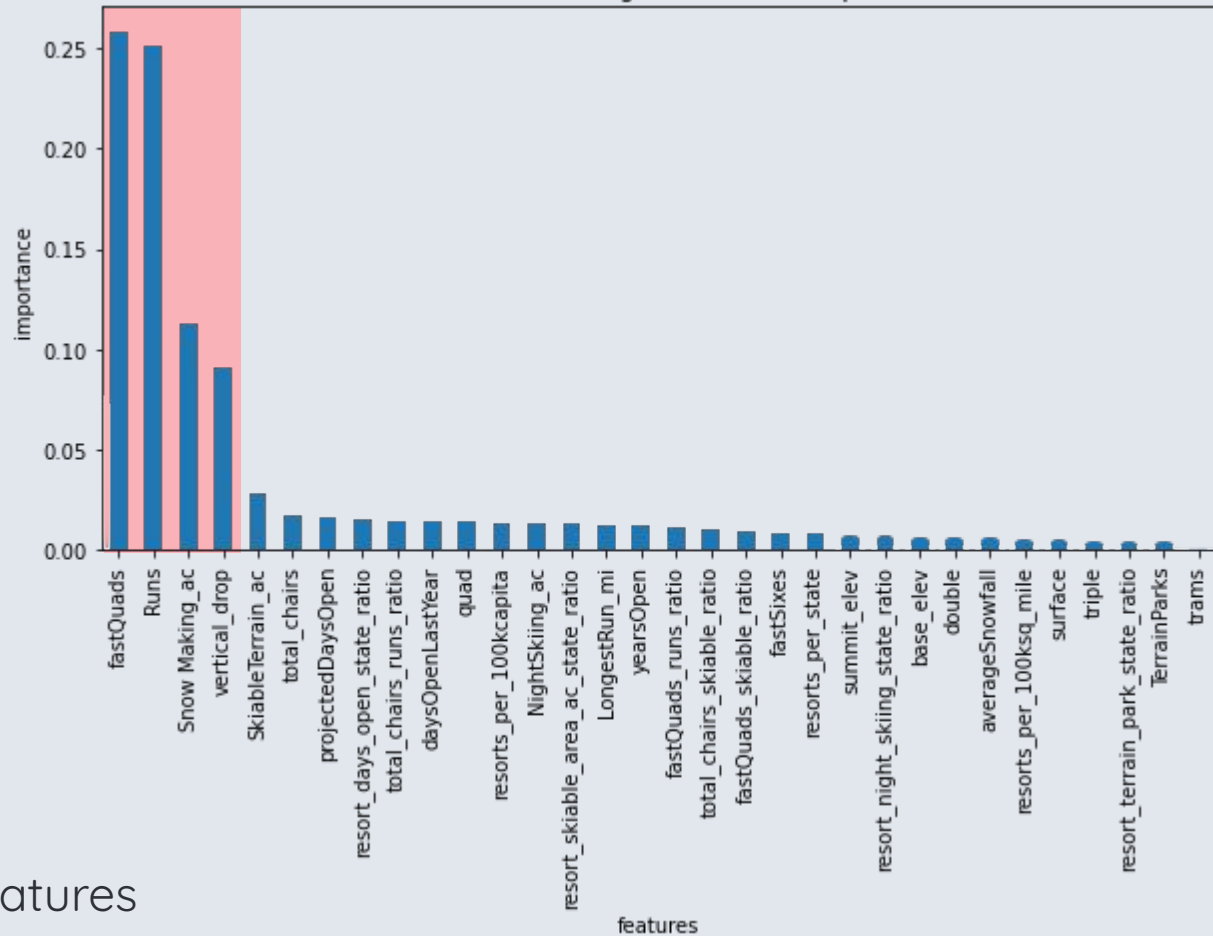
○ 330 US resorts in same market share

Resort Name	State	Vertical Drop	...
Alyeska Resort	Alaska	2500	...
Eaglecrest Ski Area	Alaska	1540	...
Hilltop Ski Area	Alaska	294	...
Arizona Snowbowl	Arizona	2300	...
...

State data

State	Pop.	Area
Alabama	4903185	52420
Alaska	731545	665384
Arizona	7278717	113990
Arkansas	3017804	53179
...

Best random forest regressor feature importances

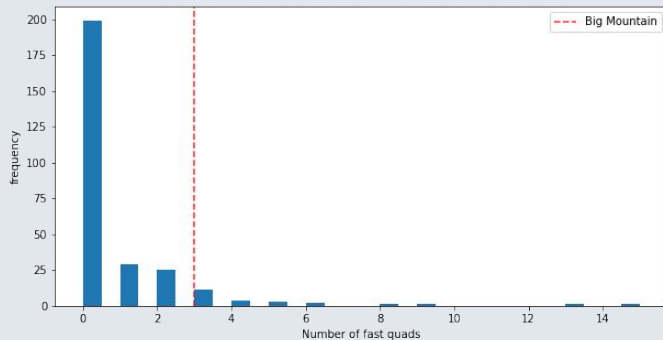


Top four features

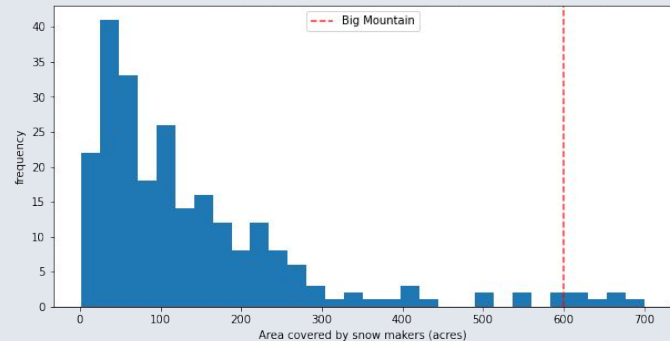


DISTRIBUTIONS OF TOP FOUR FEATURES

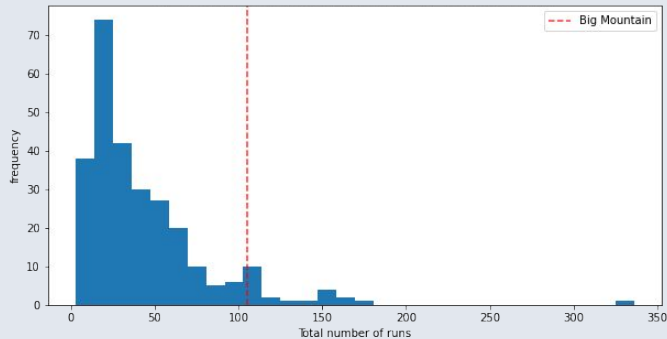
Number of Fast Quad Chairs



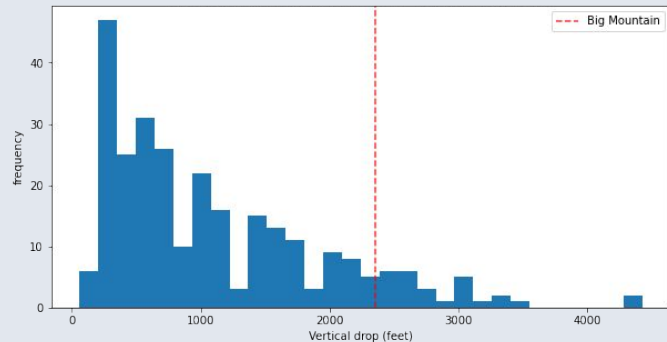
Area covered by snow makers



Total number of runs



Vertical drop



MODELING RESULTS

ASSUMPTIONS

350,000 visitors

Each visitor skis for, on average, 5 days

Current Price

\$81

\$84.98

RECOMMENDED PRICE

\$95.37

\$105.76

— \$10.39
Mean absolute error

+ \$10.39
Mean absolute error



● ADDITIONAL SCENARIOS

1. **Permanently closing down up to 10 of the least used runs.**
2. **Increase the vertical drop by adding a run to a point 150 feet lower down, install an additional chair lift to bring skiers back up.**
3. Same as 2, but adding 2 acres of snow making cover.
4. Increase the longest run by 0.2 mile to boast 3.5 miles length, requiring an additional snow making coverage of 4 acres.

Closing one run makes no difference in ticket price

Supports \$1.99 increase in ticket price

No difference as 2

No difference in ticket price

● BACK TO OUR GOALS

- Use data to select a better value for their ticket price
 - *Recommended ticket price: \$95.87*
 - *A mere increase of \$0.88 in ticket price would cover the increased operating cost from the new chair lift*
- Cut costs without undermining ticket price
 - *Close down Big Mountain's least used run.*
- Changes that will support an even higher ticket price
 - *Increase vertical drop by adding a run 150 feet lower, new chair lift.*
 - *Supports \$1.99 increase in ticket price*
 - *\$3,474,638 in additional revenue*



● THANK YOU!