David Eccles School of Business
THE UNIVERSITY OF UTAH

Swire Coca-Cola

Predicting Customer Success

Stephen Smart, Alvaro Gonzalez,
Brian Bombasi, Addison Farber

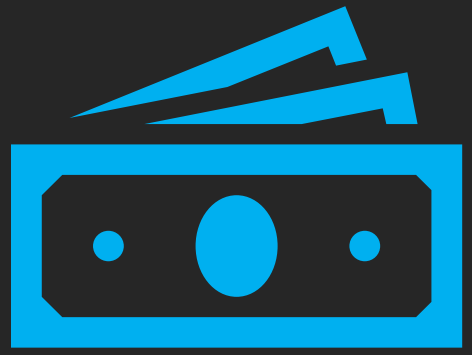
How can we identify successful customers?

Profitability

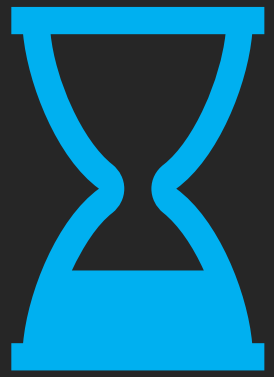
Longevity

Number of transactions

Target Variable



Projection profit in 3 years



Longevity & Activity in last 90 days

Profit in 3 years = *Profit per transaction * Expected Number of Transactions *3*

$$\text{Profit in 3 years} = \frac{Total\ Profit}{\#transactions} * \frac{\#transactions}{MaxPost\ date - MinPostdate} * 3$$

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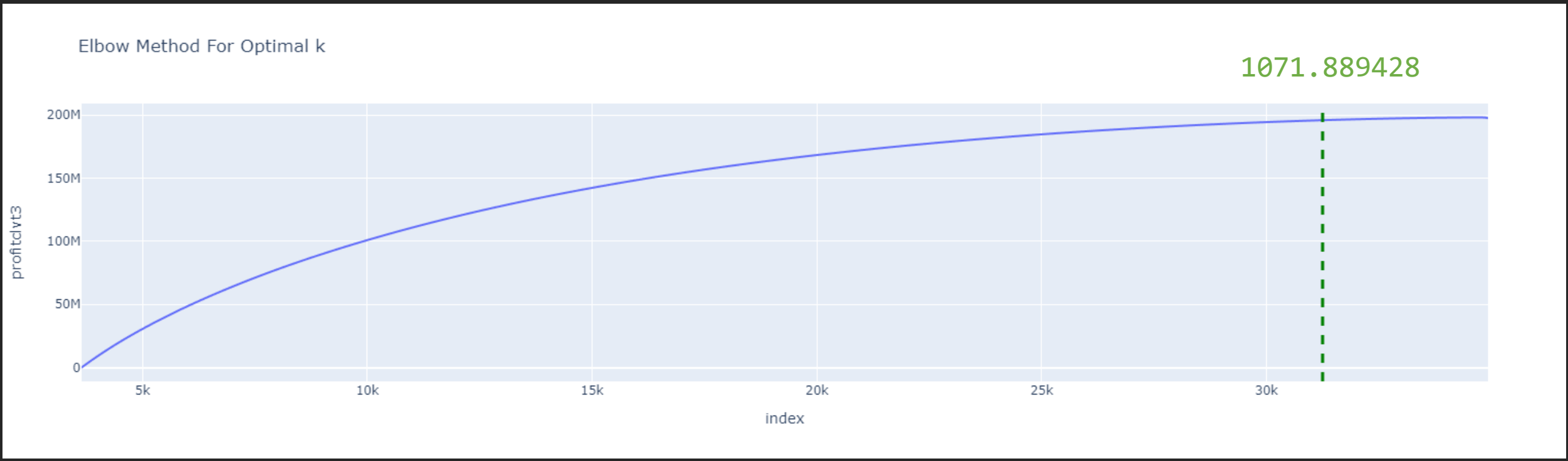
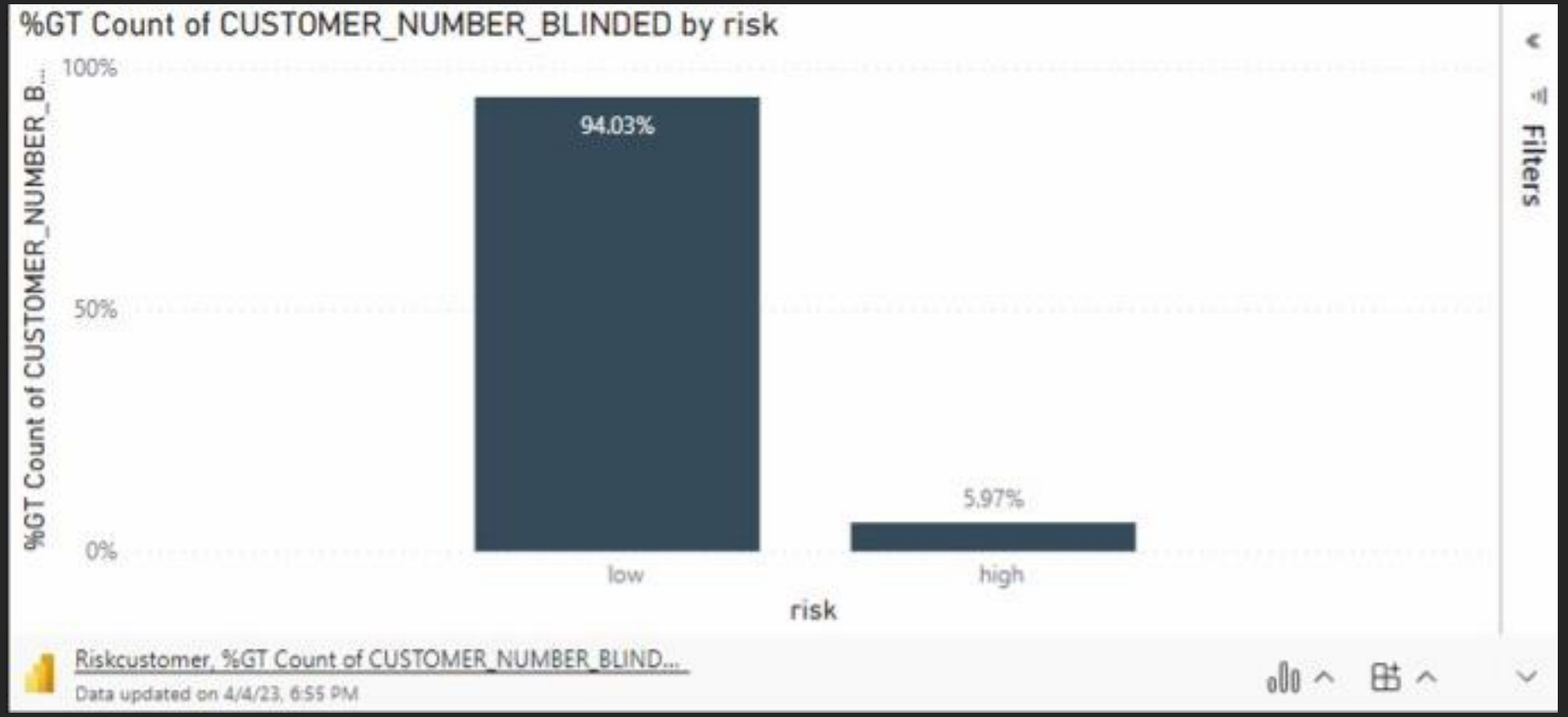
What is a good Profit in 3 years?



Imbalanced data set



Should we offer a deal ?

Profit in 3 yrs Median
4369

High Success Median
5669

Low Success Median
636

Average net benefit of Customer Success

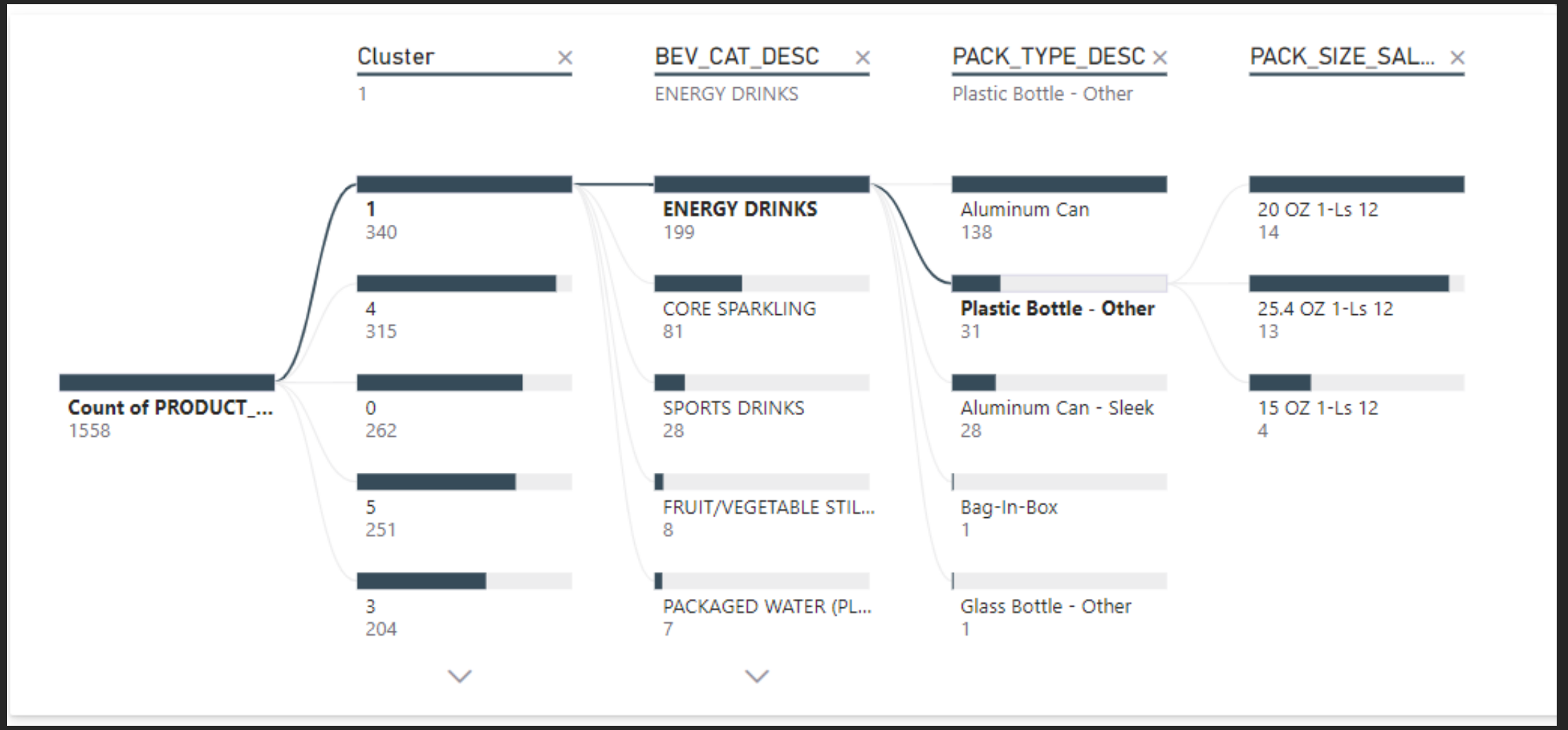
	Predicted low	Predicted High
Actual low	0	-3733
Actual High	-1300	1300

Profit in 3 yrs Median 4369

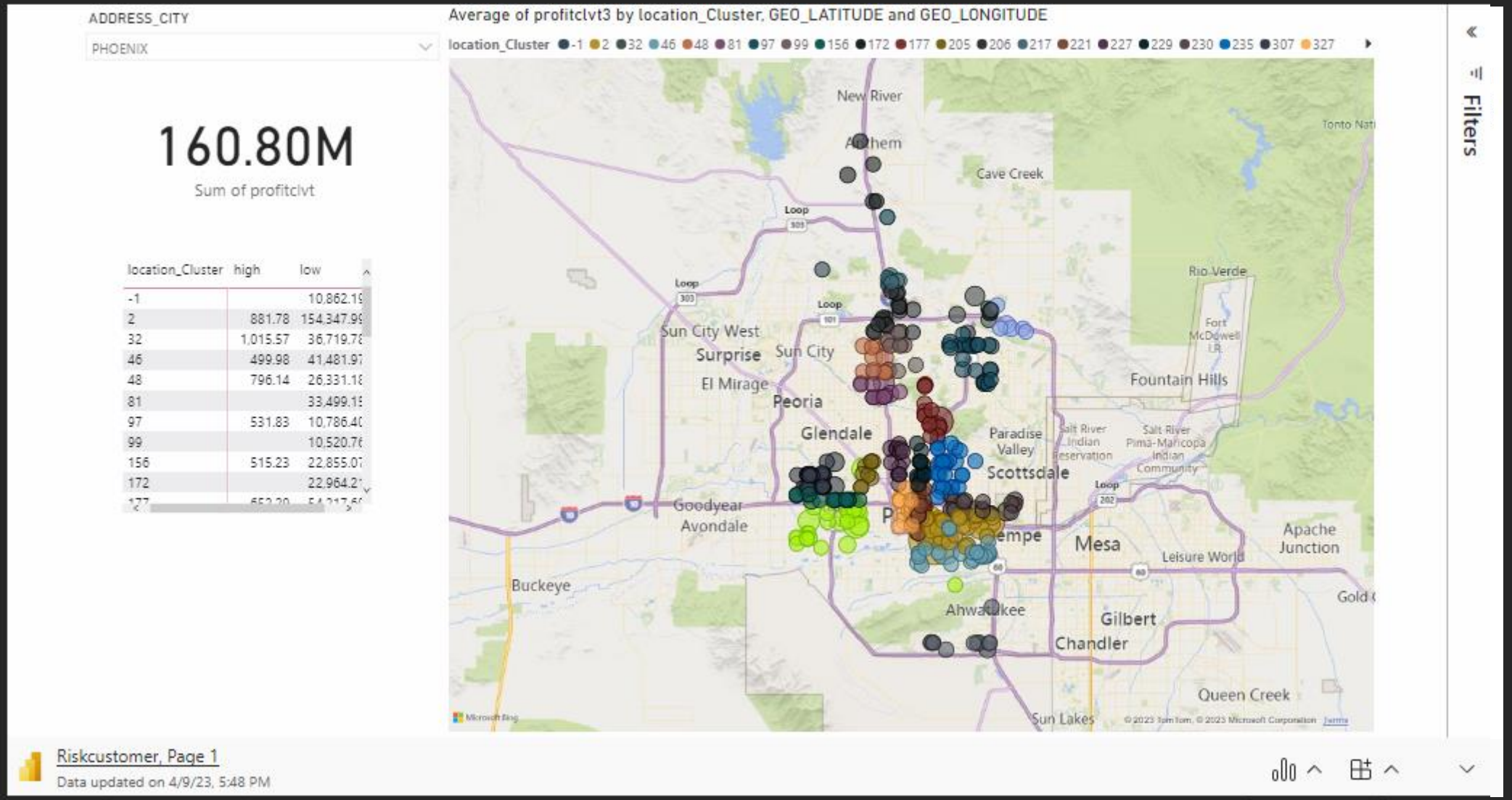
SVM increases in average 1087

Logistic Regression weighted increases 1064

Product Clustering



Location Clustering



Future Analysis
+
Recommendations

1) Improved methods of modeling customer success

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2) Discount Risk Mitigation

Improved Modeling Method

Current Challanges

- Sales predictions are not necessarily based off previous sales

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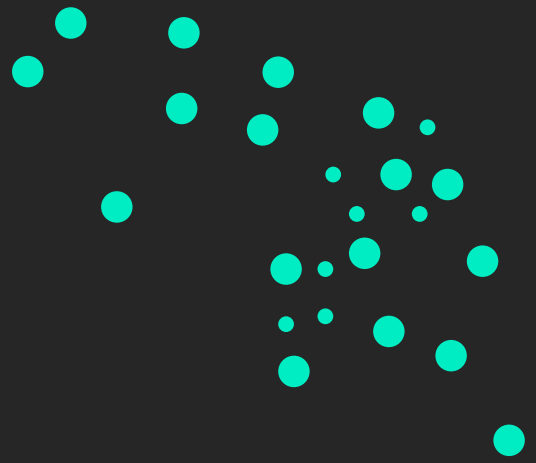
Improved Modeling Method

Current Challanges

- Sales predictions are not necessarily based off previous sales
- We are actually asking for a prediction of the B2B partner's success
- Location plays a much great factor than initially realized

Feature engineering



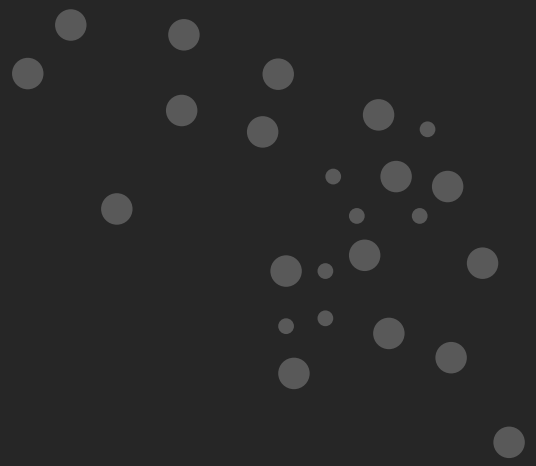
Clustering

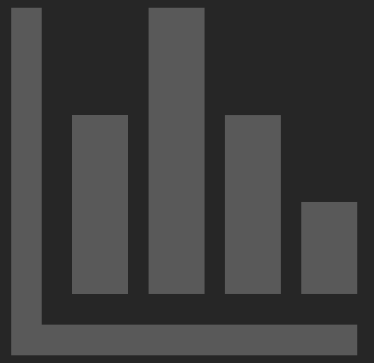
Census Data

Yelp Data

Google Analytics

Features engineering

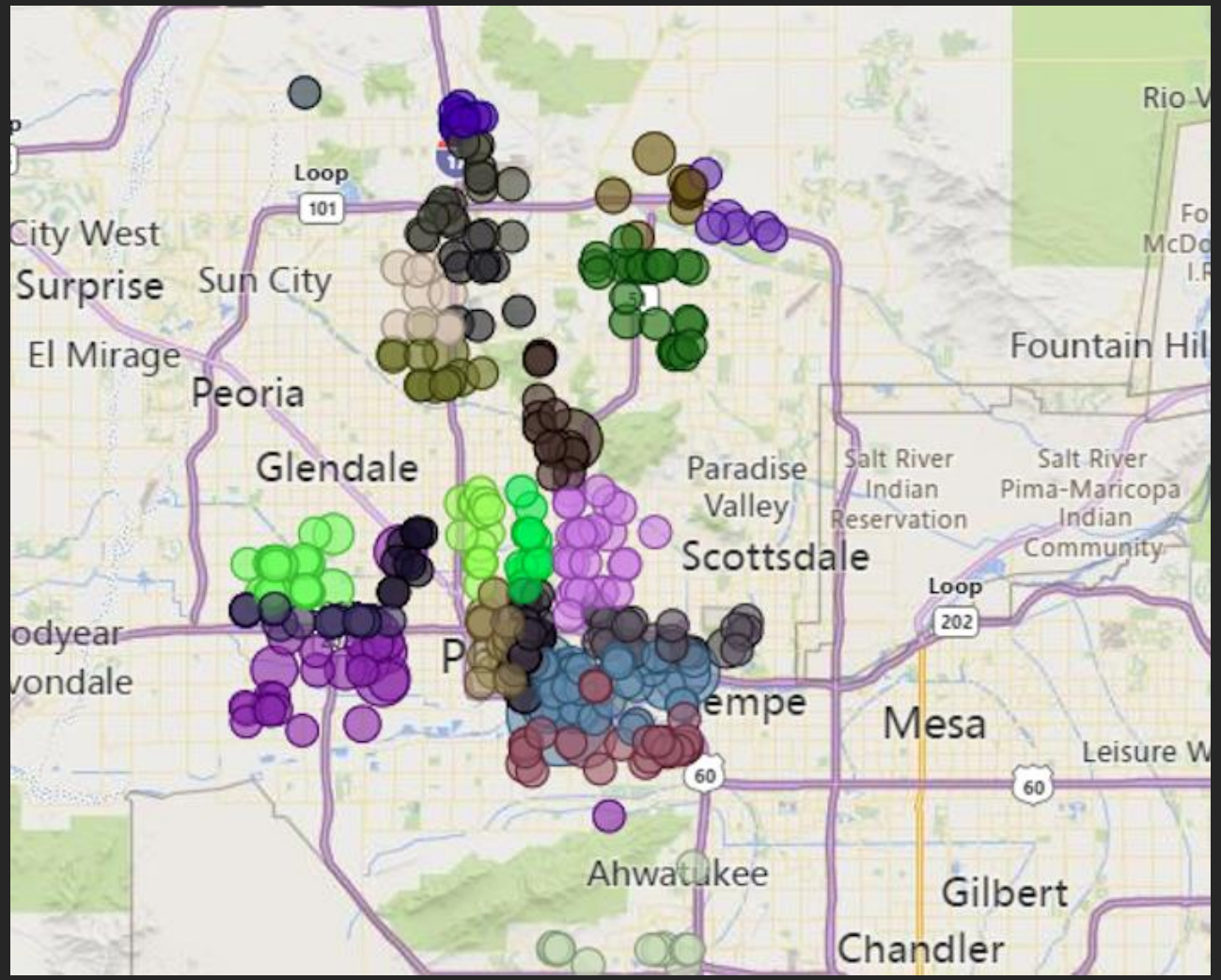




Clustering Census Data Yelp Data **Google Analytics**

This strategy provides a tailored analysis for each location and the assigned sales rep

Improved Modeling Method



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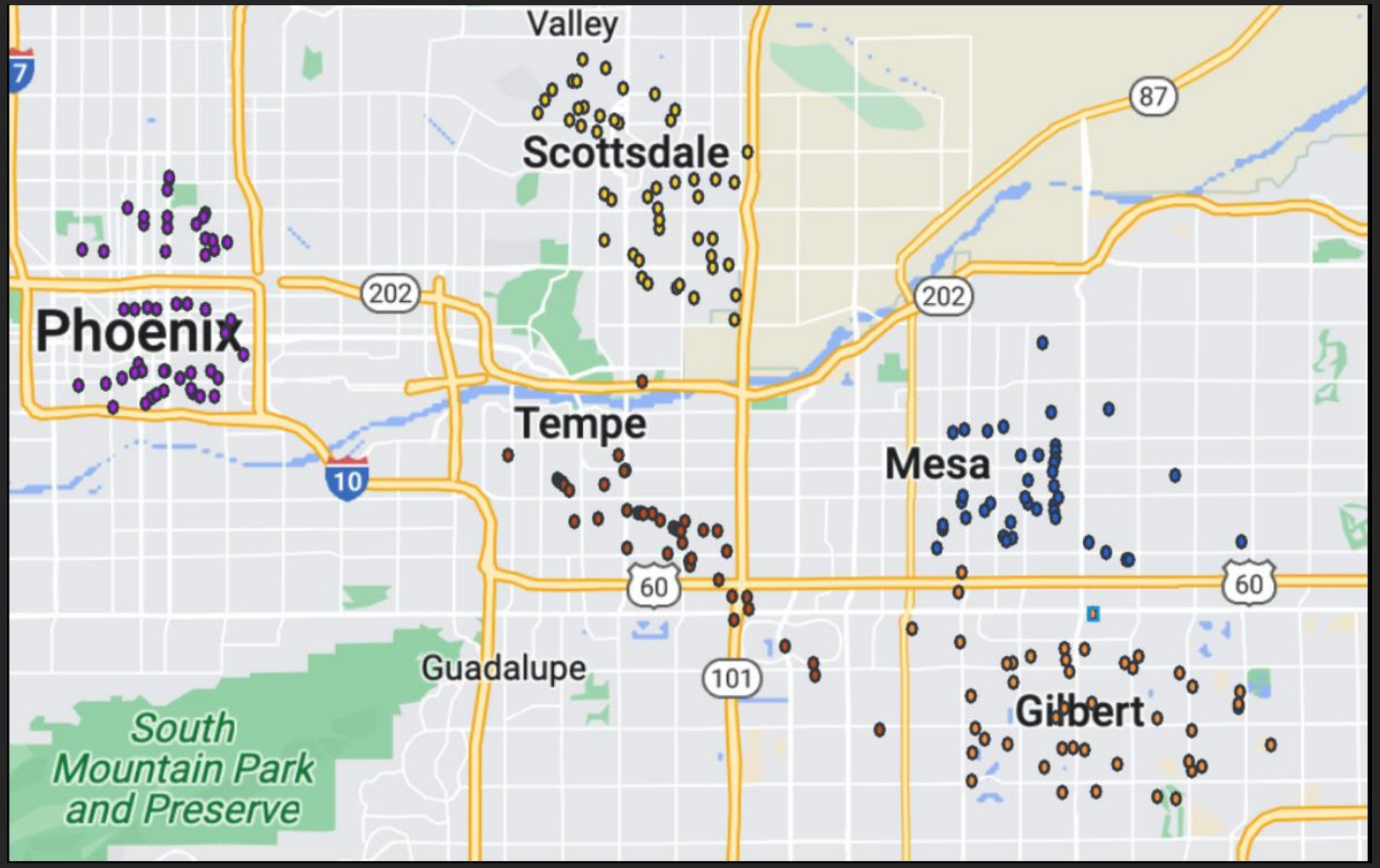

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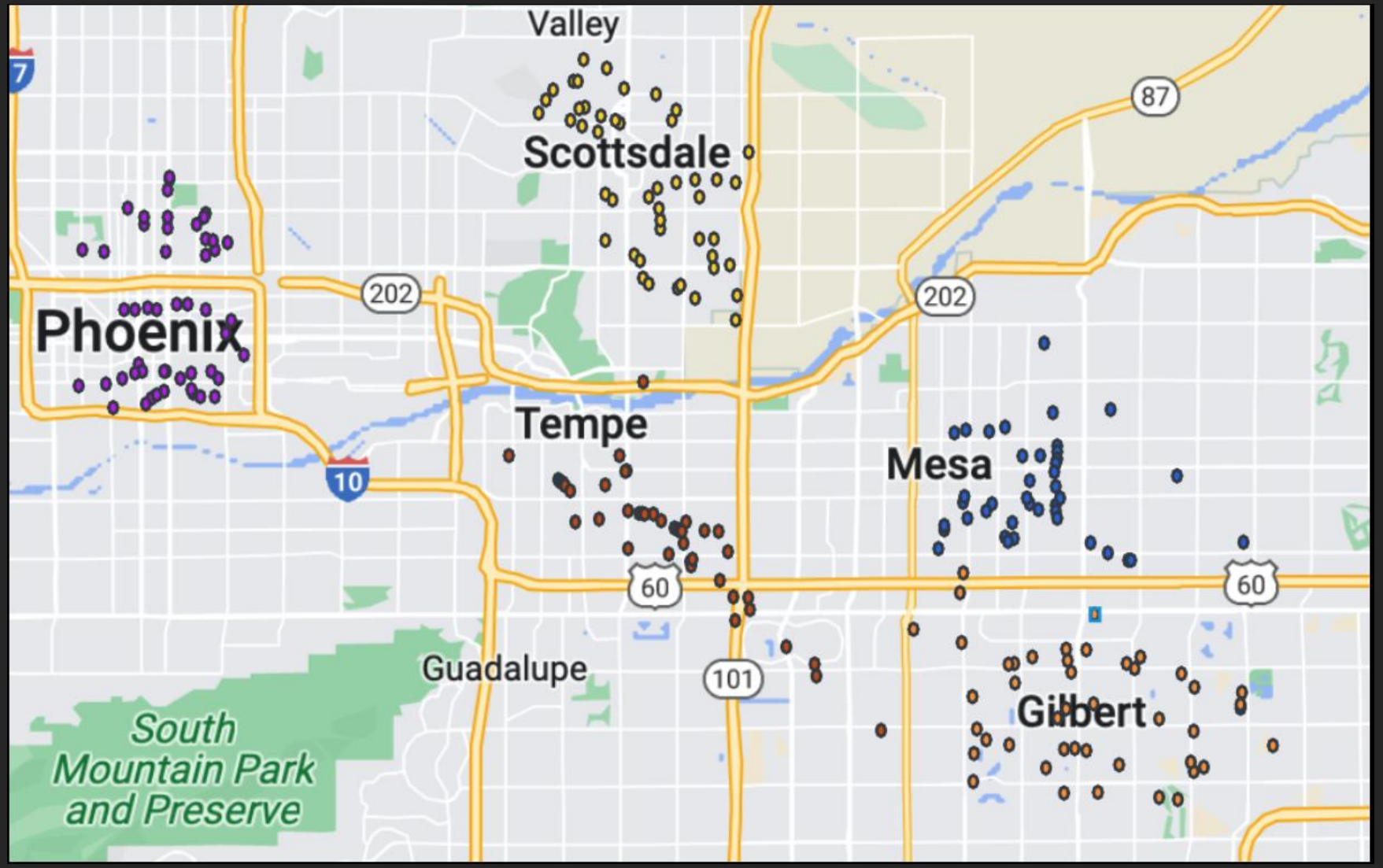
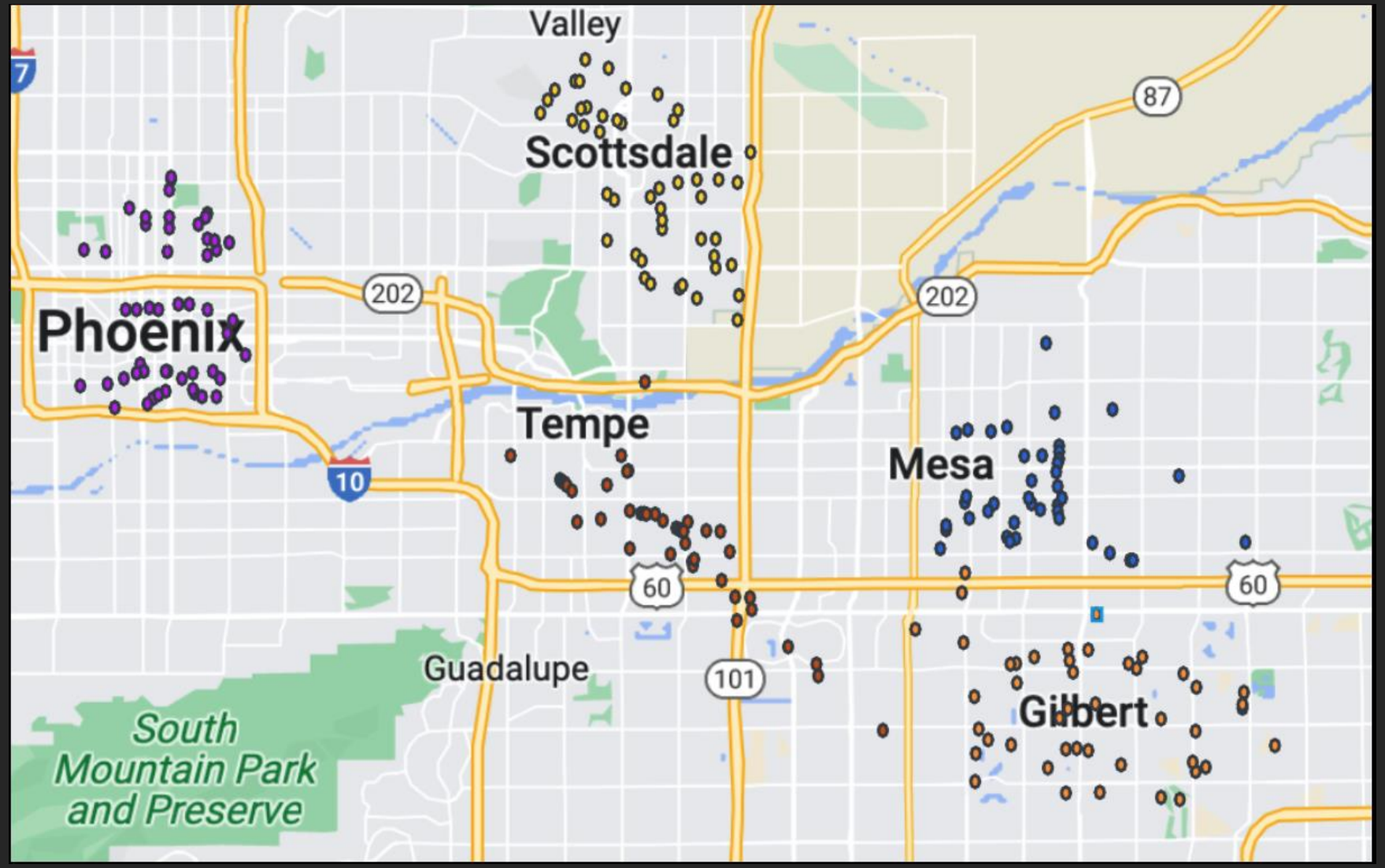


Mostly businesses: Customers + working professionals

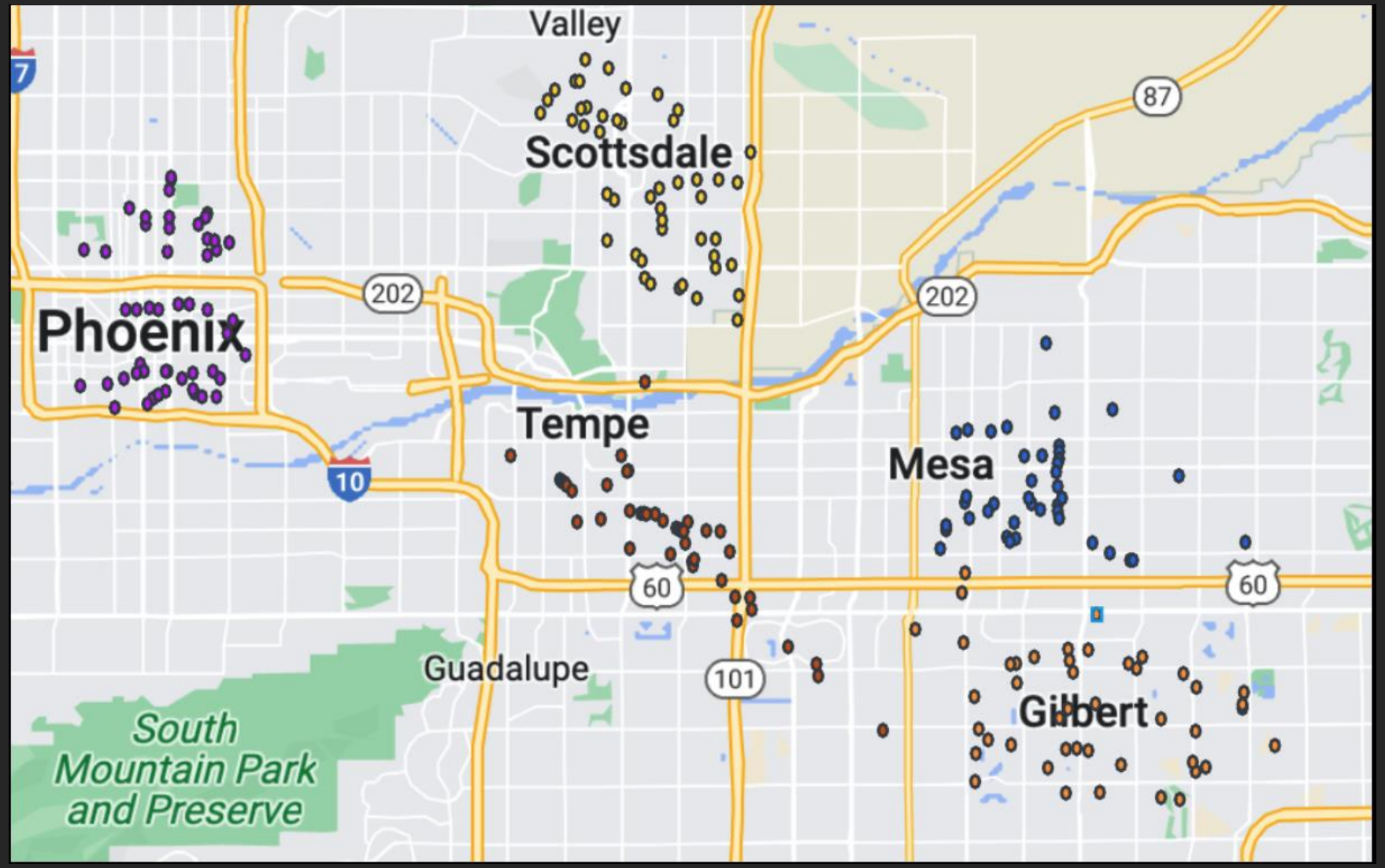
Improved Modeling Method



Mostly businesses: Customers + working professionals

Very wealthy area. Customers would be affluent

Improved Modeling Method



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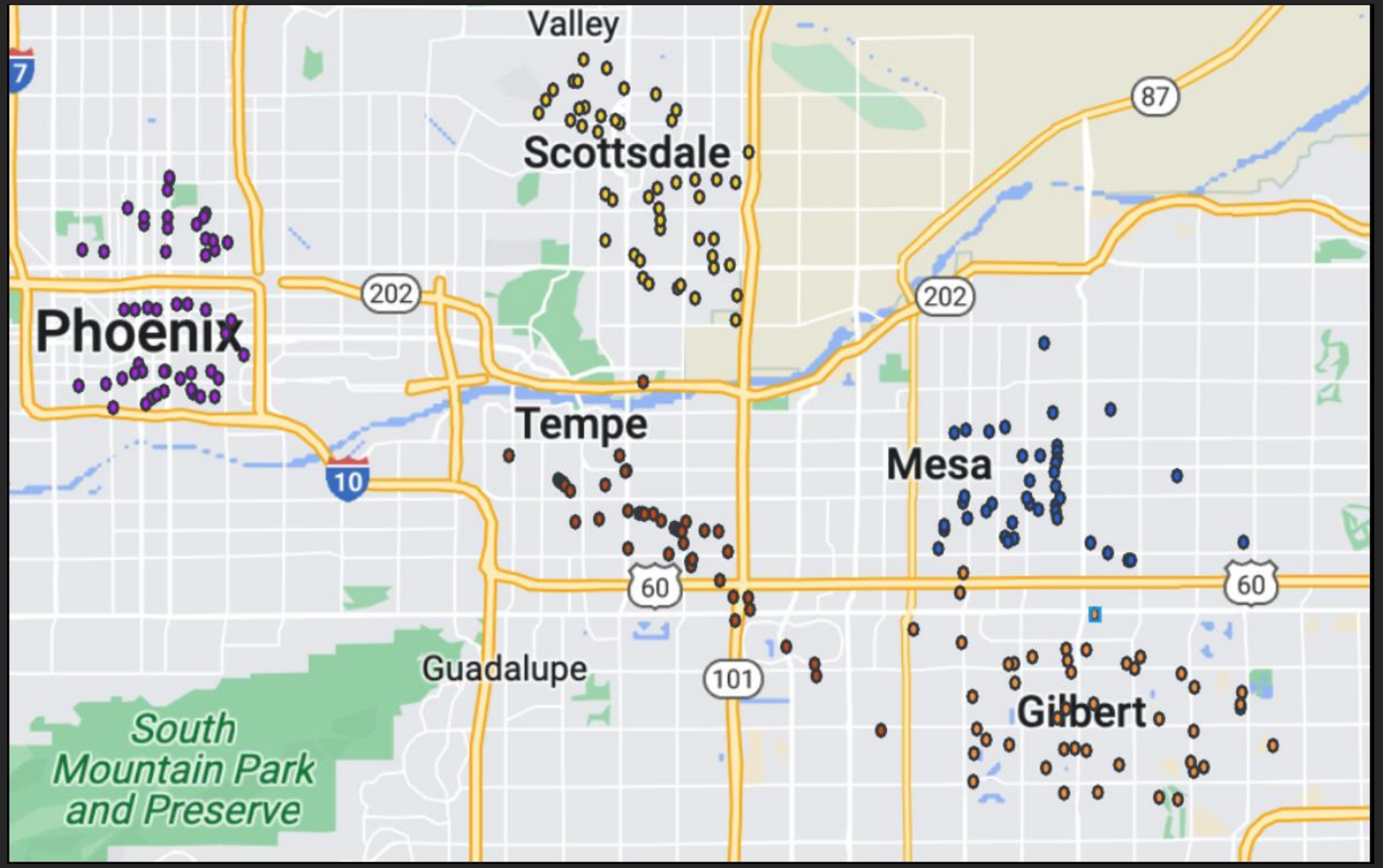

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Popular tourist area as well as a large amount of college students and bars

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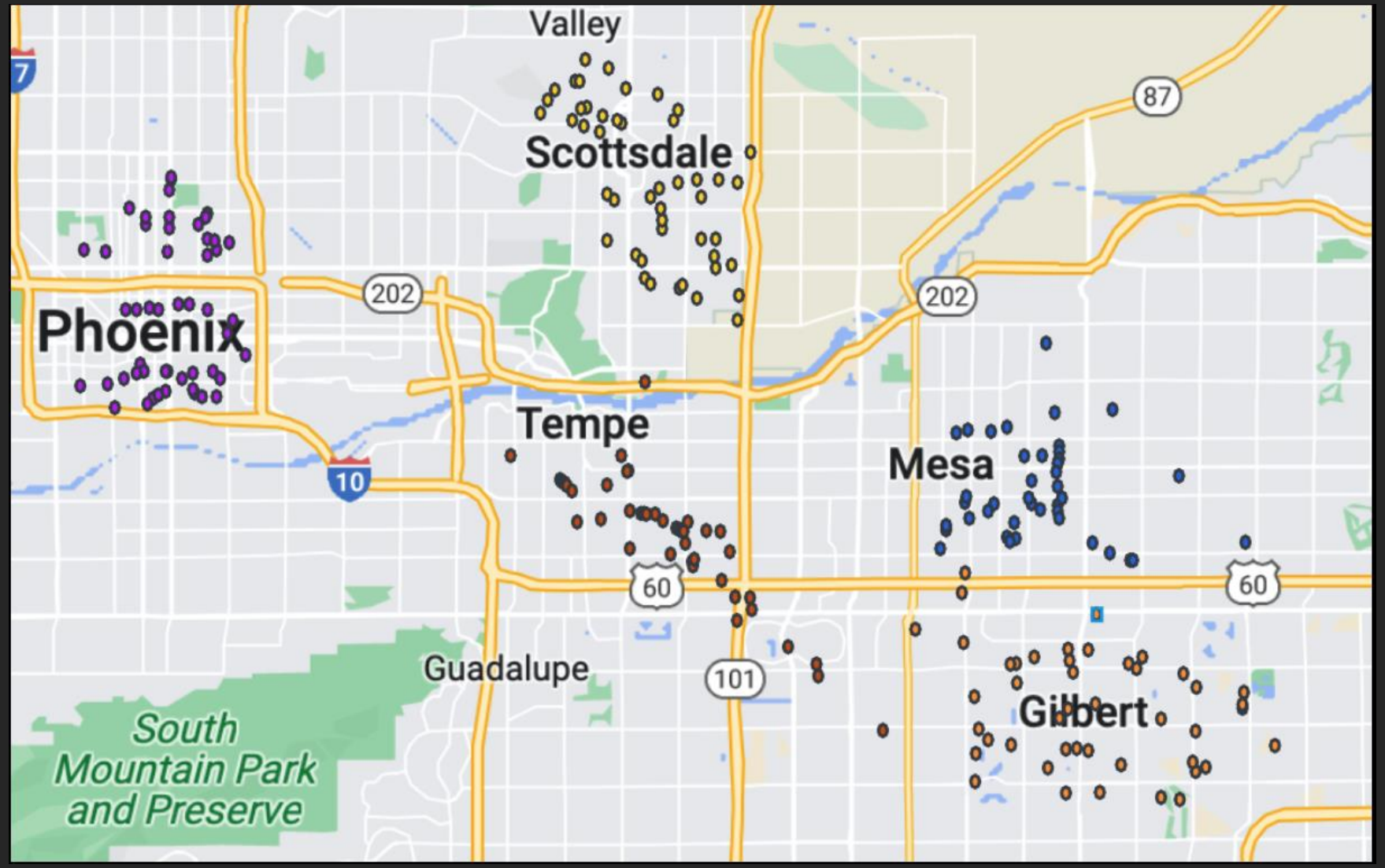

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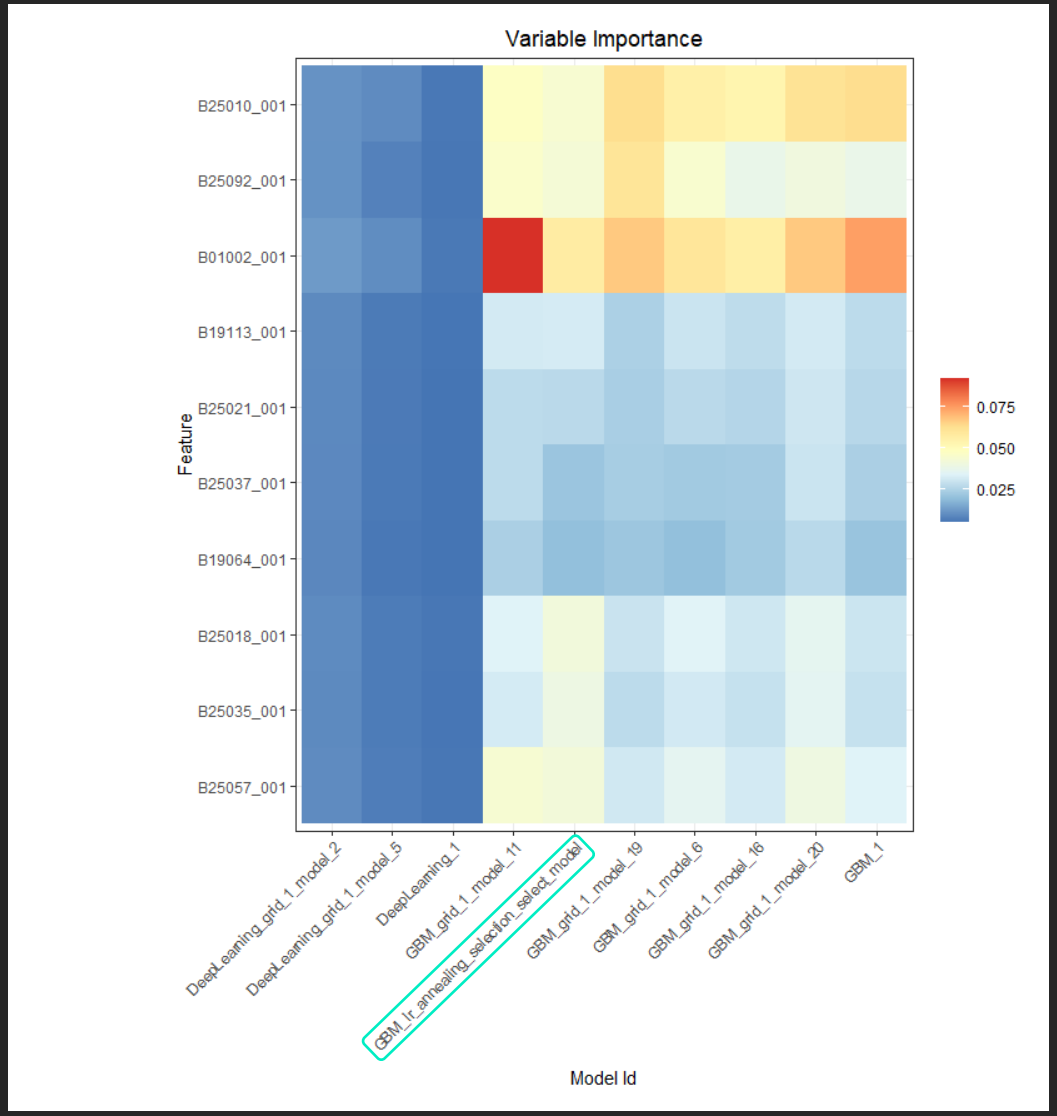
Upper-Middle Class. Full of suburbs

Total Profit for EATING/DRINKING with Auto ML

Census Data



- Avg. Household Size
- Median Monthly Owner Costs
- Median Age
- Median Family Income
- Median # of Rooms
- *Median Year Structure by rent/own*
- Aggregate Interest/Dividends/Rental Income
- Median # of Rooms
- Median Year Structure Built
- Lower Contract Rent Quartile ($)

Swires's Target Market Demographic

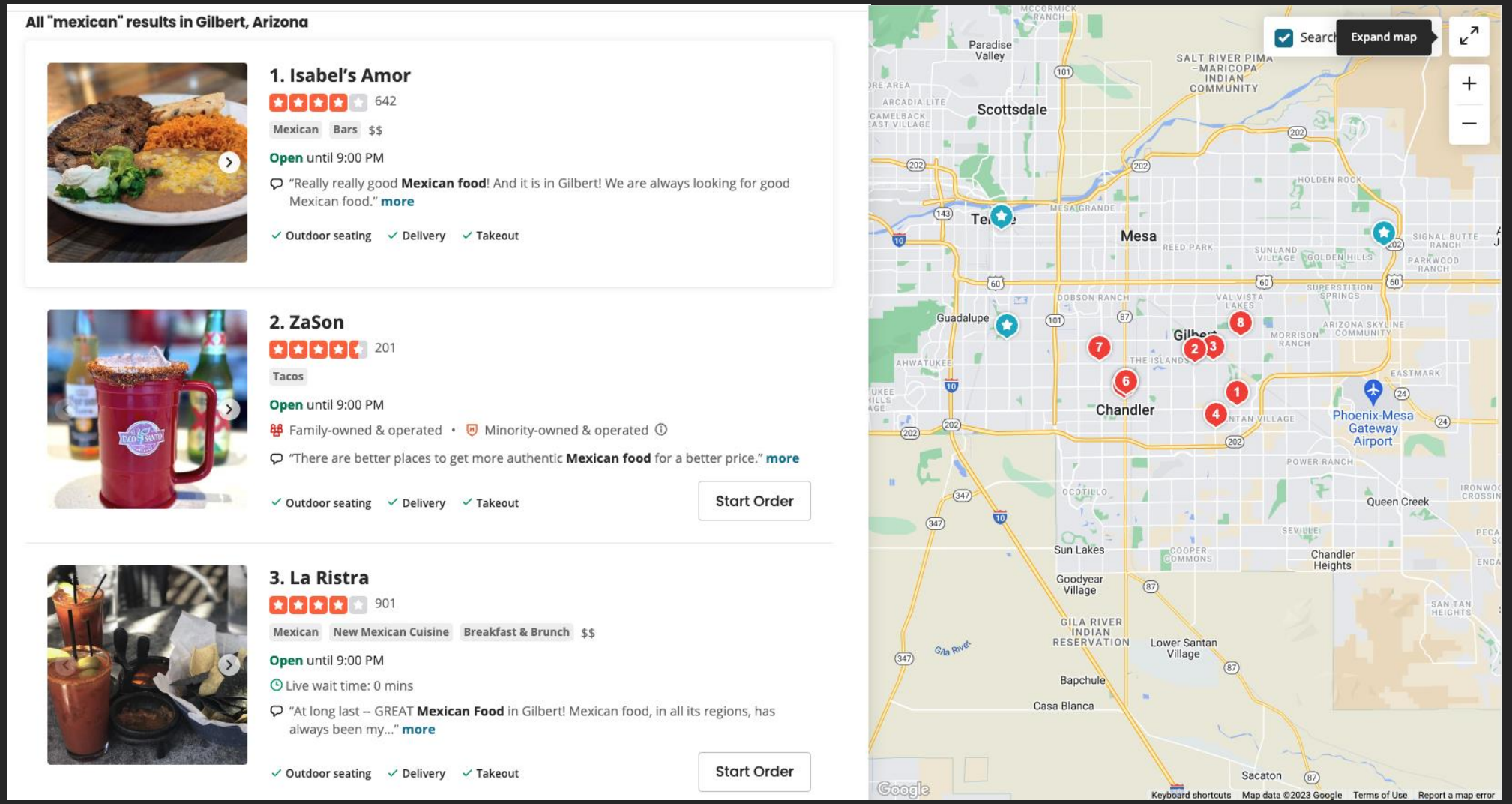
Potential B2B Partner's Demographic

Census Data

AGE	AGE	**75% MATCH**
GENDER	GENDER	**40% MATCH**
MEDIUM INCOME	MEDIUM INCOME	**90% MATCH**

Improved Modeling Method

Yelp Data



Improved Modeling Method

Yelp Data

RESPONSE 200 TRY IT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        "state": "WA"
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SEO

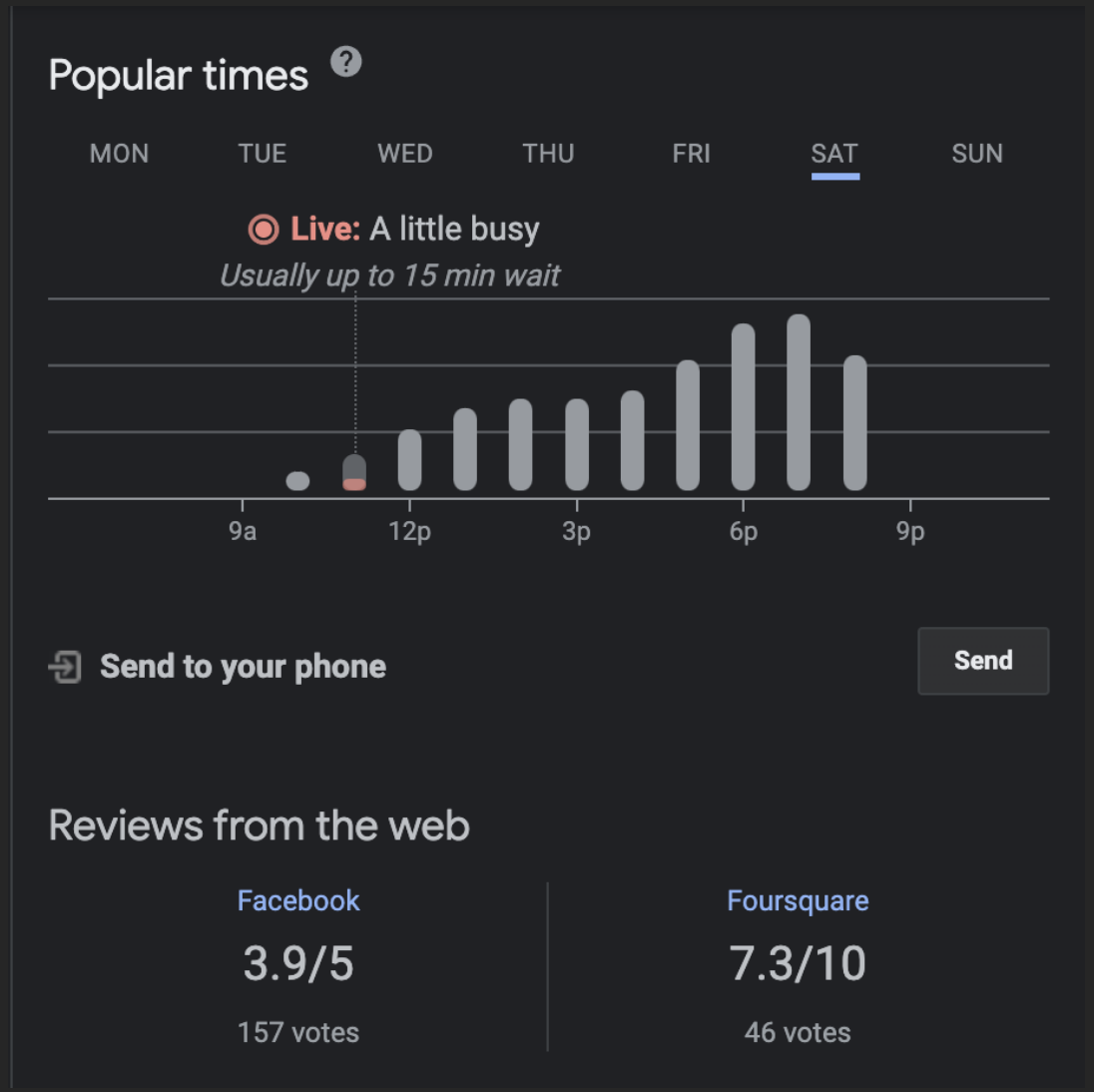
- What is a business doing to promote itself, rank higher is searches?

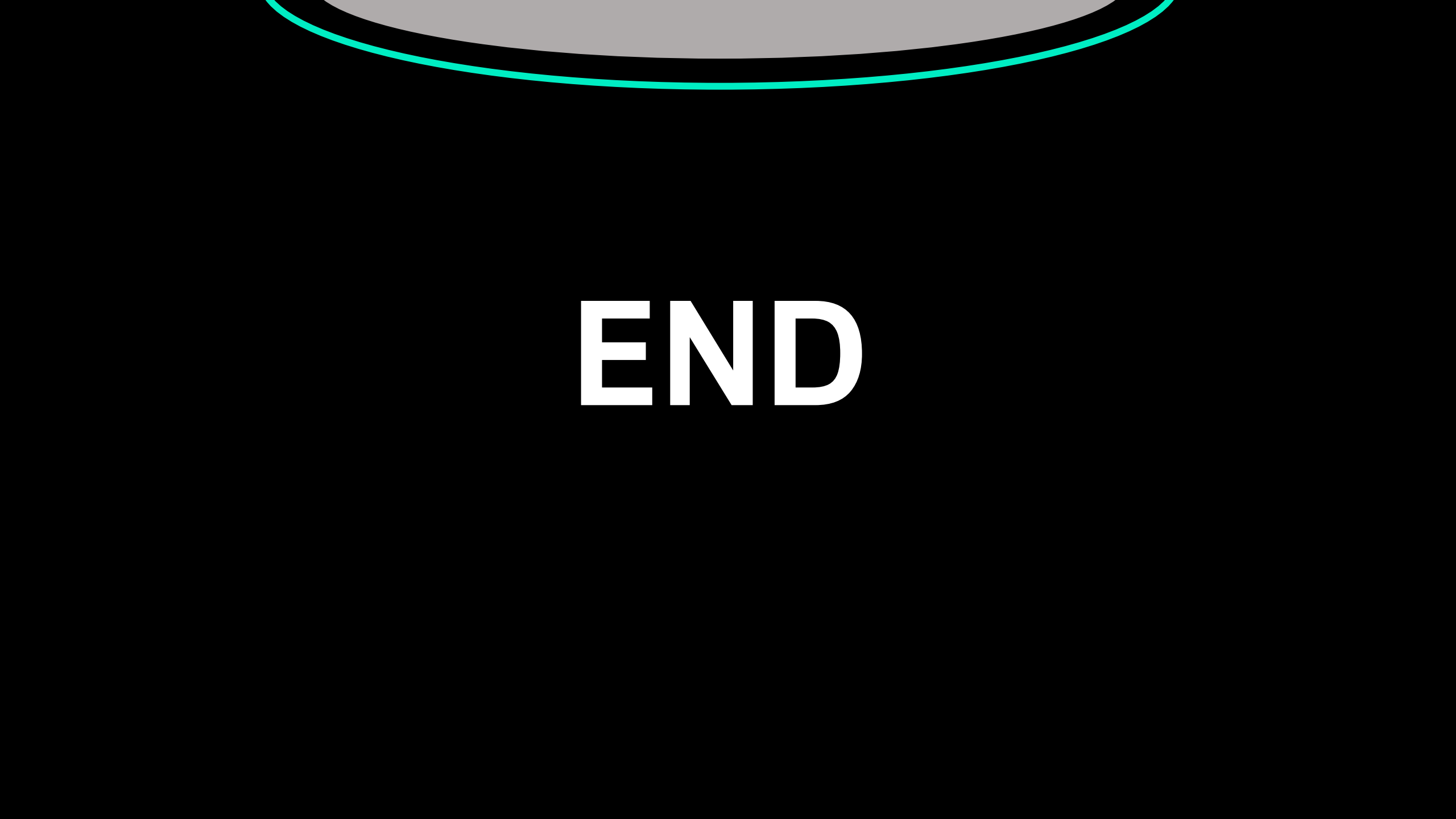
Reputation

- How is the business perceived by the public?
- How often are they getting reviews?

Improved Modeling Method

Google Analytics

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Q + A