



Business Strategy Optimization

Team 12

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When starting or
expanding
business...



- ❖ Where is the best location?



- ❖ What type of business - category/sub-category?



- ❖ What are the customers really thinking?

Data Overview



Utilize data from Yelp to help us plan a successful business launch

- ❖ Over 174,000 businesses
 - City
 - State
 - Zip
 - Current Average Rating
 - Business Category



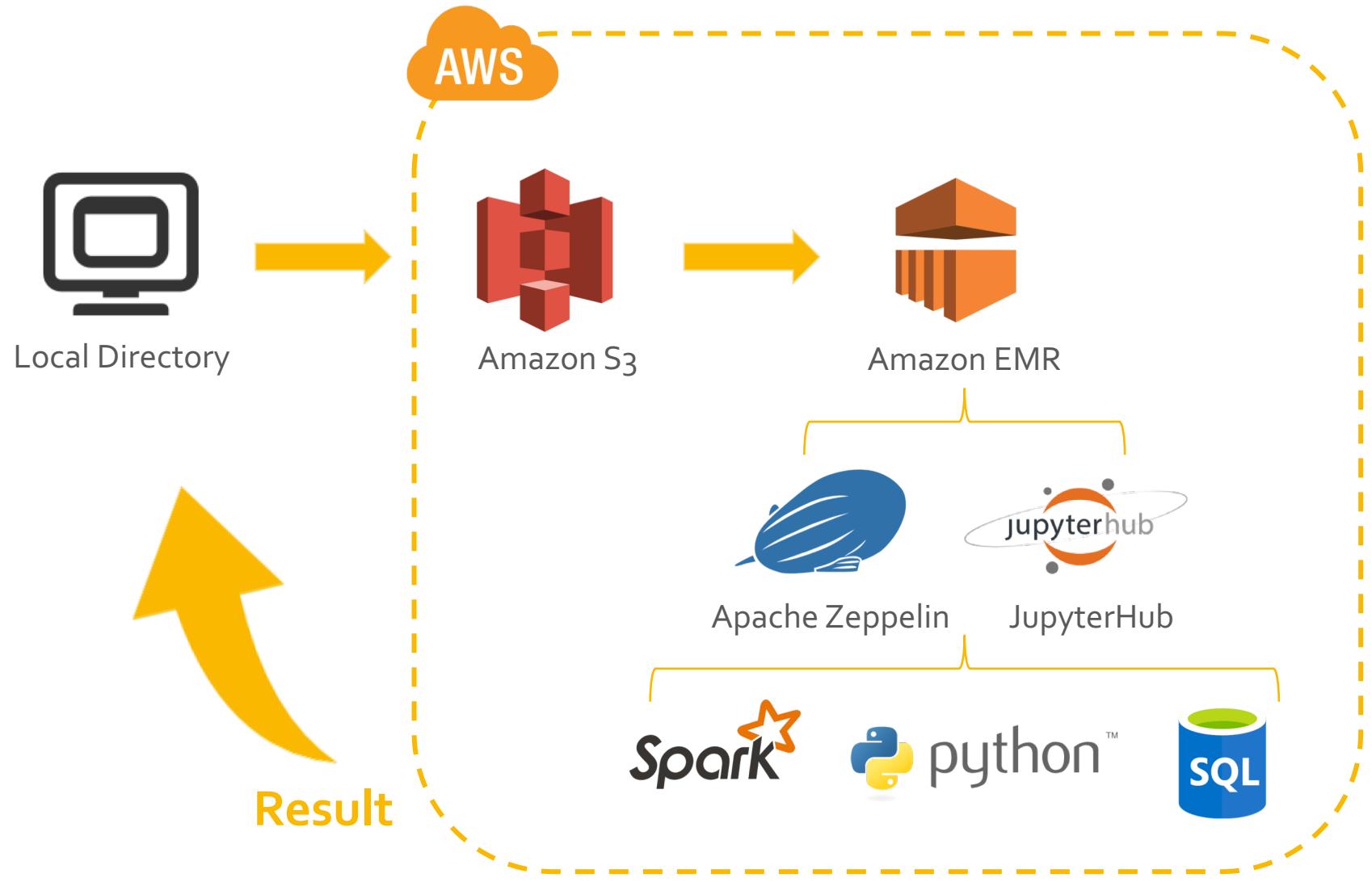
- ❖ Over 5.2 Million Reviews on the businesses
 - Rating
 - Text
 - Date
 - User ID



TECHNOLOGIES



Process Flow



Why Zeppelin?

Problem



Solution

- ❖ Other visualization tools can cost upward of \$70 a month per person
- ❖ Open sourced, no license fee, and large community of developers maintaining



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- ❖ Switching may cost a lot
- ❖ High communication cost across analysts with different programming backgrounds

Solution



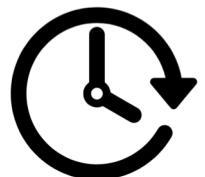
- ❖ Open sourced, no license fee, and large community of developers maintaining
- ❖ Comes default on many EMR configurations on 3rd party hosting such as AWS or Azure
- ❖ Support many programming languages



Why Zeppelin?

Problem

- ❖ Other visualization tools can cost upward of \$70 a month per person
- ❖ Switching may cost a lot
- ❖ High communication cost across analysts with different programming backgrounds
- ❖ Take more time to visualize analysis when shifting data to another tool

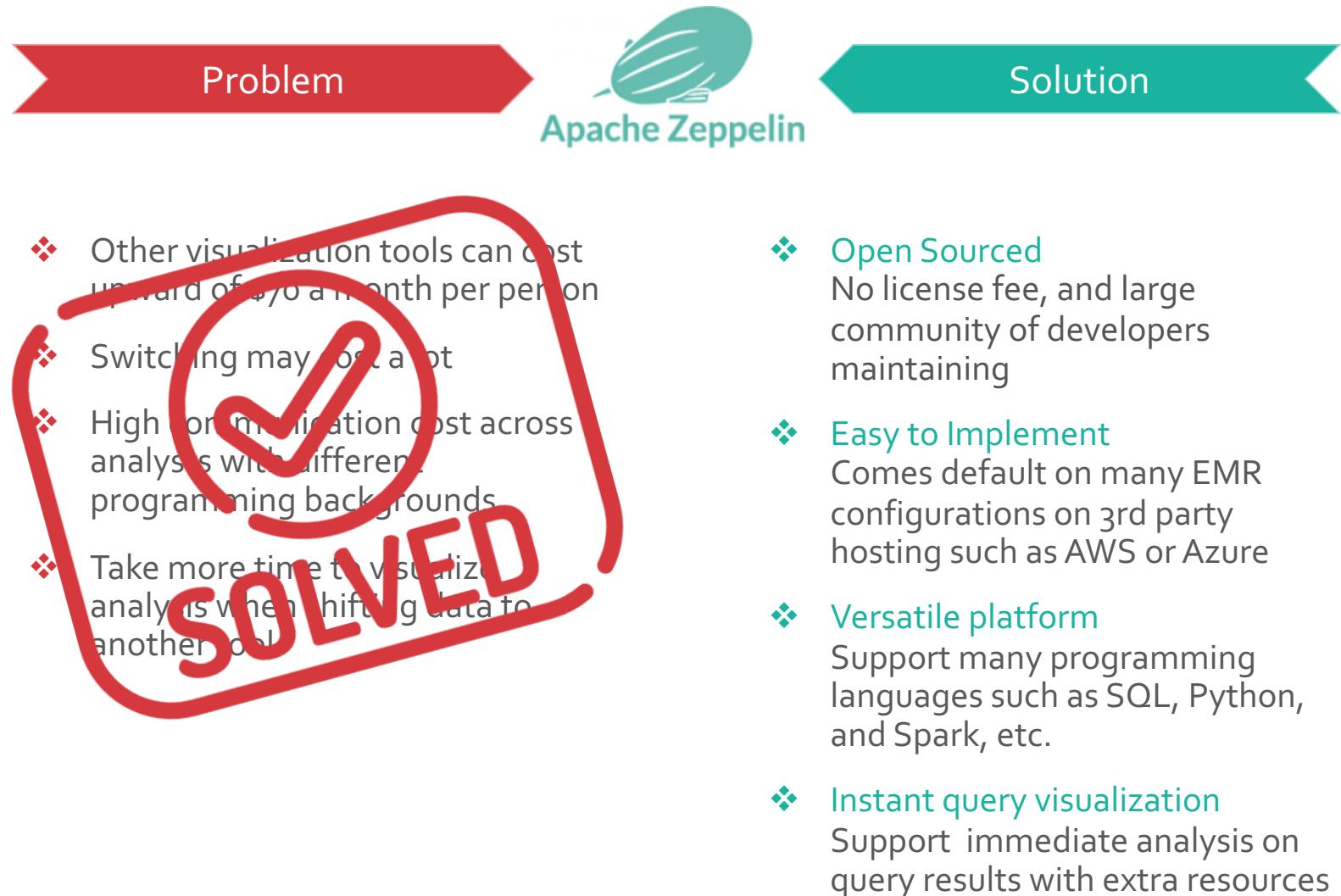


Solution

- ❖ Open sourced, no license fee, and large community of developers maintaining
- ❖ Comes default on many EMR configurations on 3rd party hosting such as AWS or Azure
- ❖ Support many programming languages
- ❖ Support immediate analysis on query results with extra resources



Why Zeppelin?



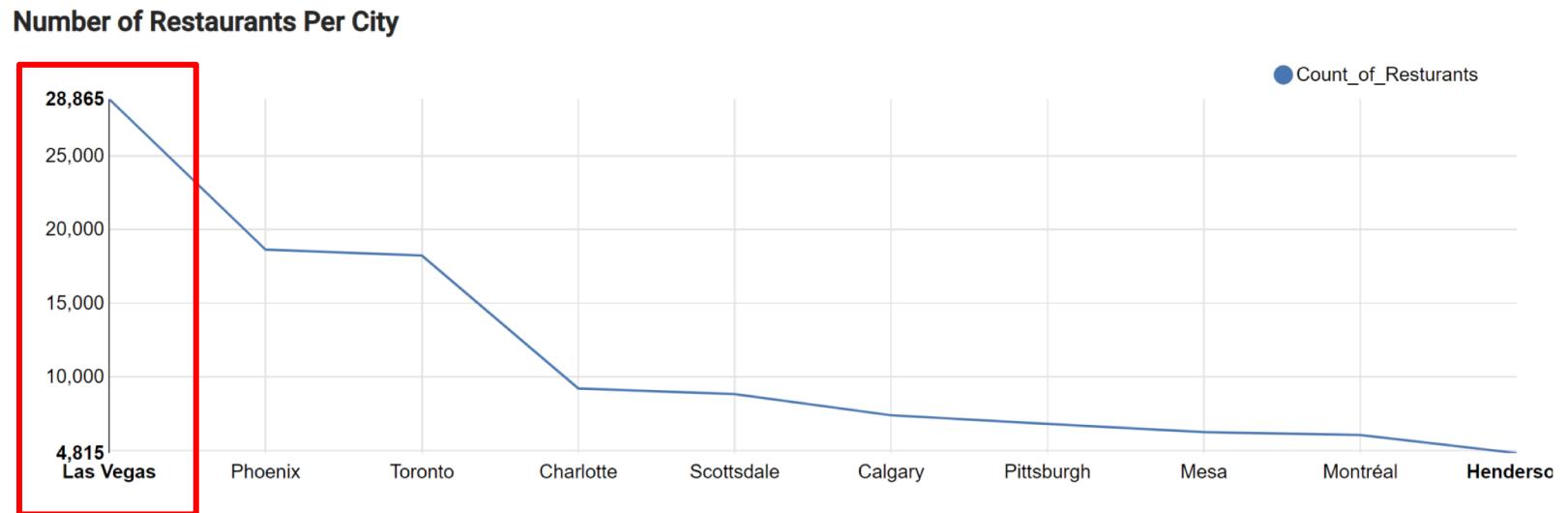
KEY FINDINGS



Where are the most popular areas?

- Exploratory Data Analytics
- Sentiment Analysis
- Other Attribute Analysis

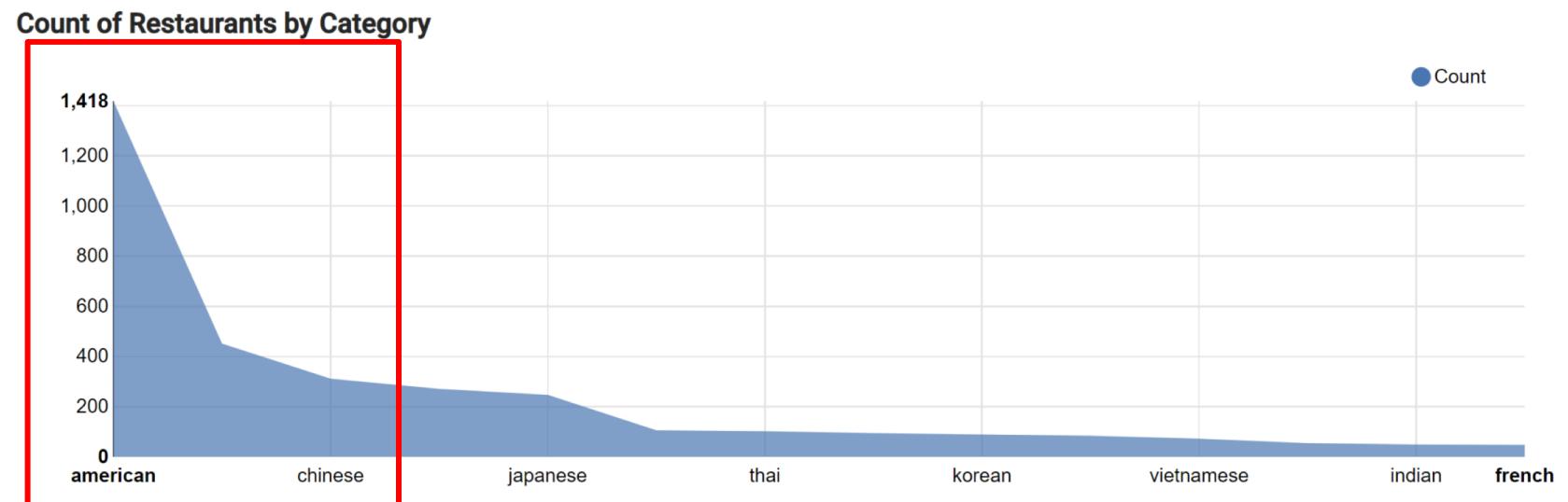
- ❖ By far Las Vegas has the most number of businesses. We will choose this city because we have the most data.



Which categories have the most restaurants?

- Exploratory Data Analytics
- Sentiment Analysis
- Other Attribute Analysis

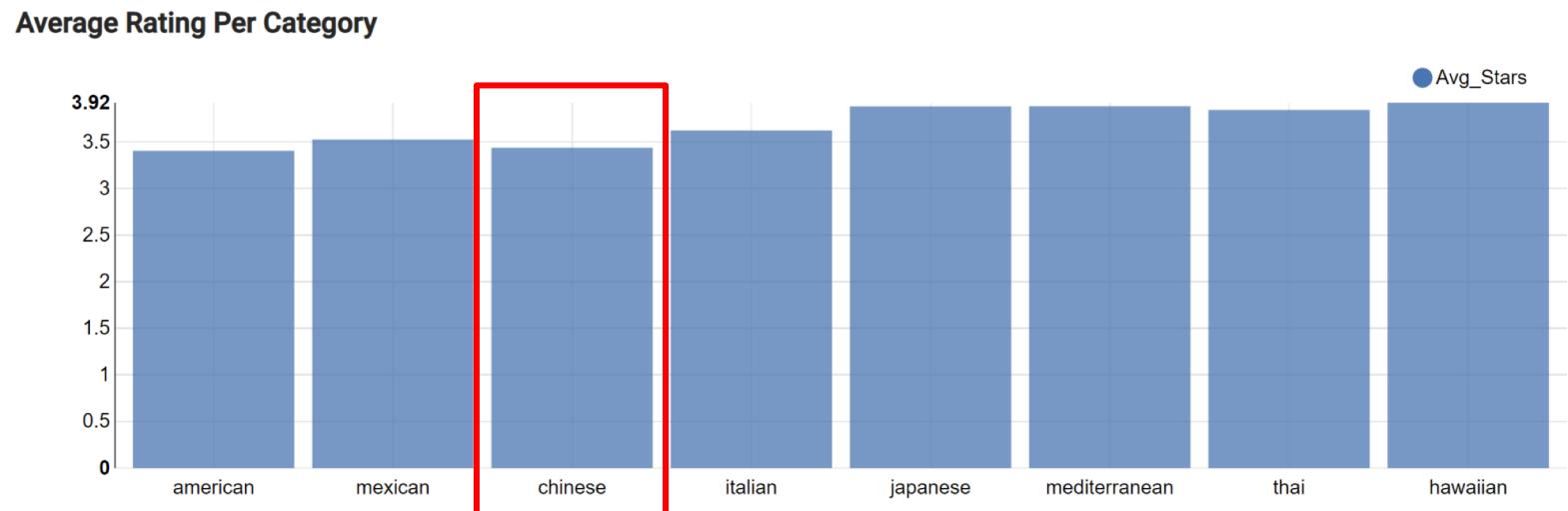
- ❖ The categories with the most restaurants are American, Mexican, and Chinese.



How do the various categories differ in average rating?

- Exploratory Data Analytics
- Sentiment Analysis
- Other Attribute Analysis

- ❖ Average rating for Chinese restaurants is the lowest across all categories.

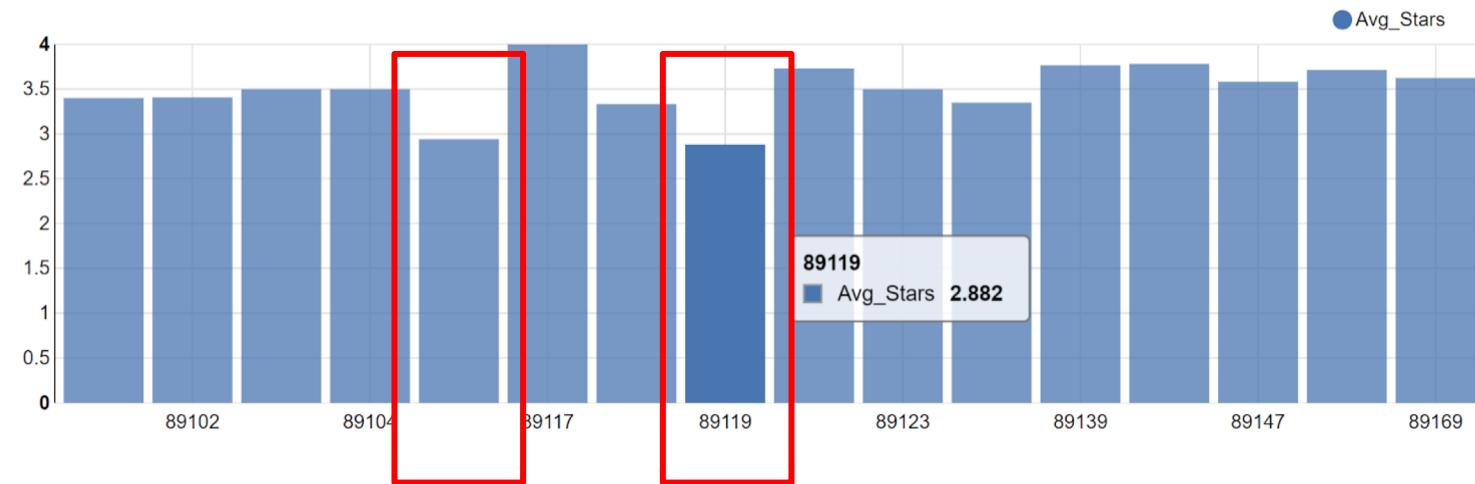


Are there any specific zip codes in Las Vegas with low ratings?

- Exploratory Data Analytics
- Sentiment Analysis
- Other Attribute Analysis

- ❖ Average rating for Chinese restaurants in zip codes 89119 and 89109 are very low.

Average Rating Per Zip Code by Chinese Restaurants



Can we identify reasons in the reviews?

- Exploratory Data Analytics
- Sentiment Analysis
- Other Attribute Analysis

- With hundreds of reviews it is not feasible to individually read each review.

Restaurant Review Count and Avg Stars

name	Count	Avg_Stars
Buffet At Asia	241	2.5103734439834025
888 Noodle Bar	37	2.810810810810811
JC Cuisine	33	3.0303030303030303
Noodle Shop	476	2.2289915966386555
Tiger Wok & Ramen	84	2.392857142857143
Rice & Company	404	3.1782178217821784
Ginseng 3	102	2.7745098039215685
FAME	89	2.134831460674157

Can we identify
reasons in the
reviews?

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- ❖ For Chinese restaurants, customers tend to care most about the taste of dim sums and will give a positive review based on the good service.



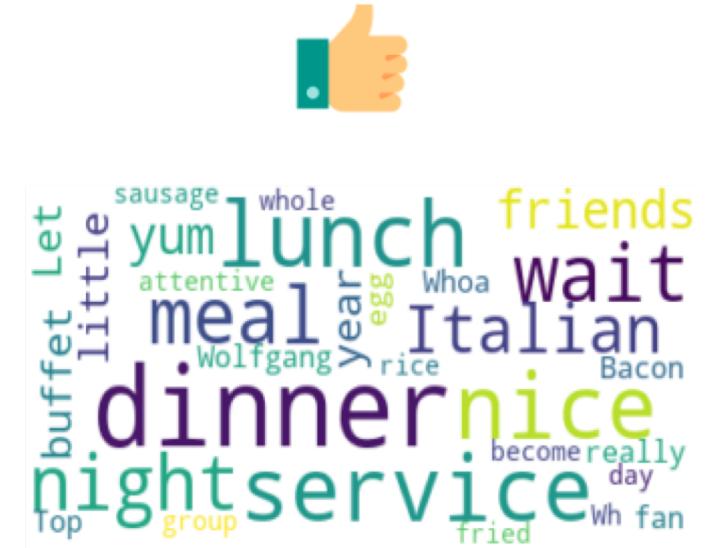
stars will Fresh weeks
come eat rice late
twice year know
Pla review first
lunch amazing dinner
experience Went
travel Strip find
China become Wow
trip chicken PF service



Can we identify
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- ❖ For all restaurants in the selected areas, the quality of service is again a main contributor.

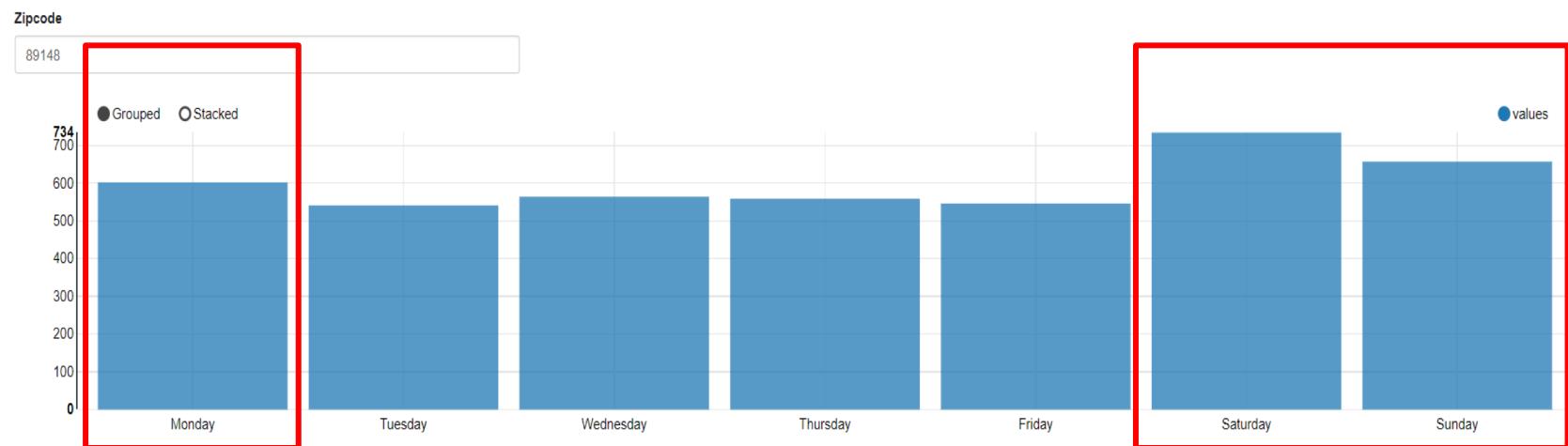


What is the distribution of potential demand?

- Exploratory Data Analytics
- Sentiment Analysis
- Other Attribute Analysis

- ❖ Customers in these specific zip codes visit Chinese restaurants most on the weekend and Mondays.

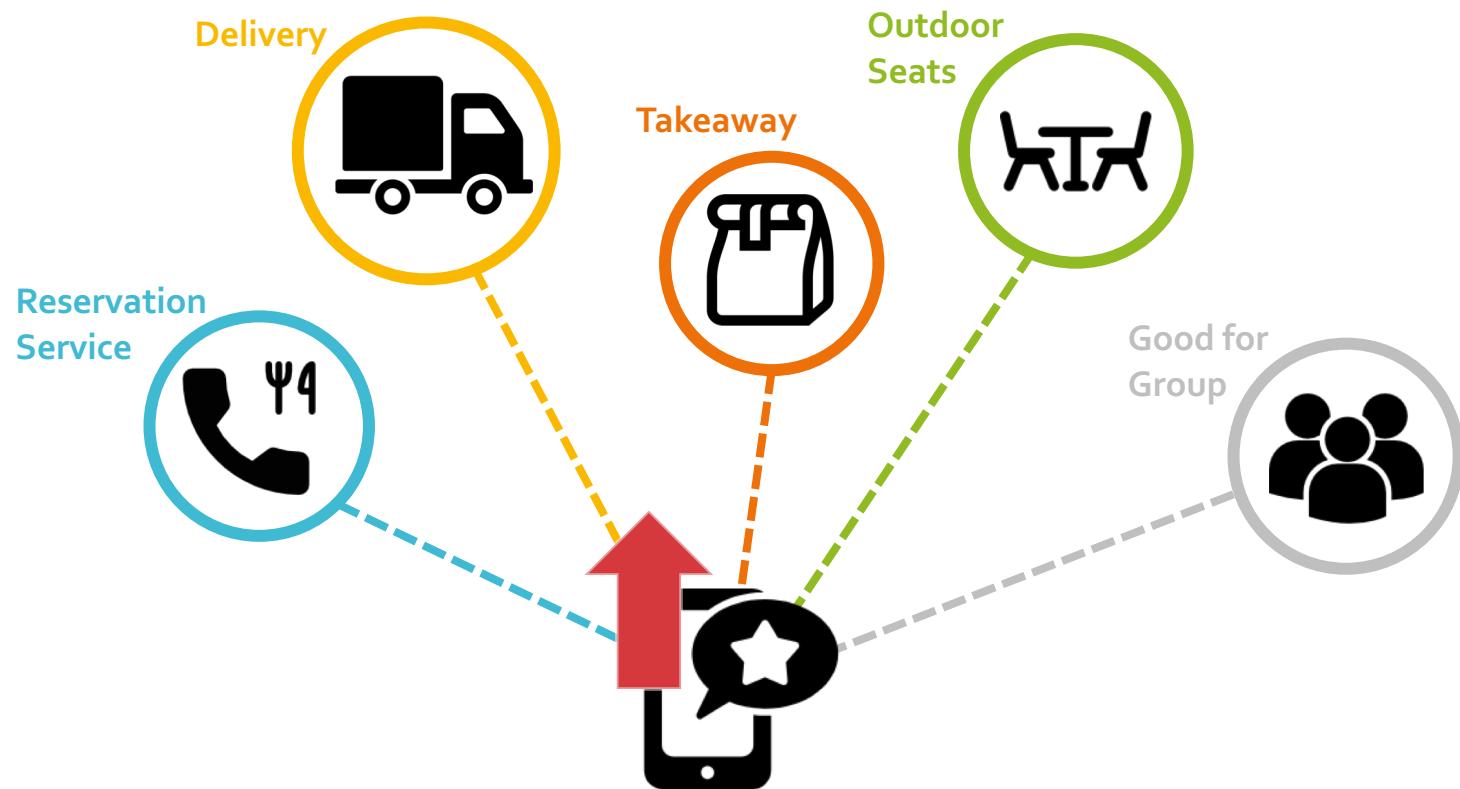
Average Number of Check-ins per Week of Day



What possible features can raise our rating?

- Exploratory Data Analytics
- Sentiment Analysis
- Other Attribute Analysis

- ❖ Using correlation matrix to discover the most relevant features of restaurants.
- ❖ Several features are highly correlated to rating and review counts, these are probably good services to consider offering.



WAY TO SUCCESS



Recommendations



- ❖ Open a Chinese Restaurant in Las Vegas, either in zip codes 89119 or 89109.



- ❖ Arrange ample service staff who are available Saturday through Monday.



- ❖ Make sure to hire individuals who are focused on high quality service.



- ❖ Provide attractive services that can affect the rating and review counts.



Thank You!