Yelp vs Zomato

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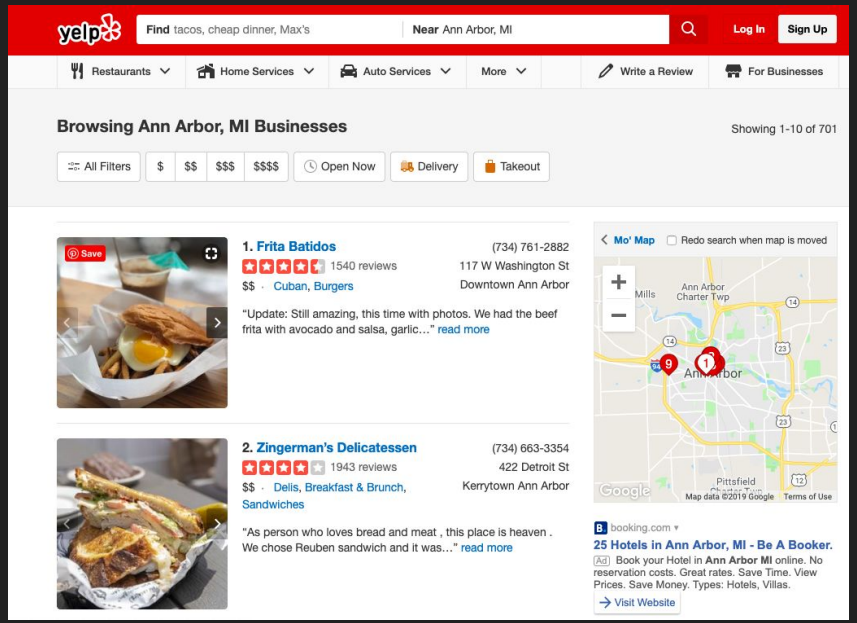
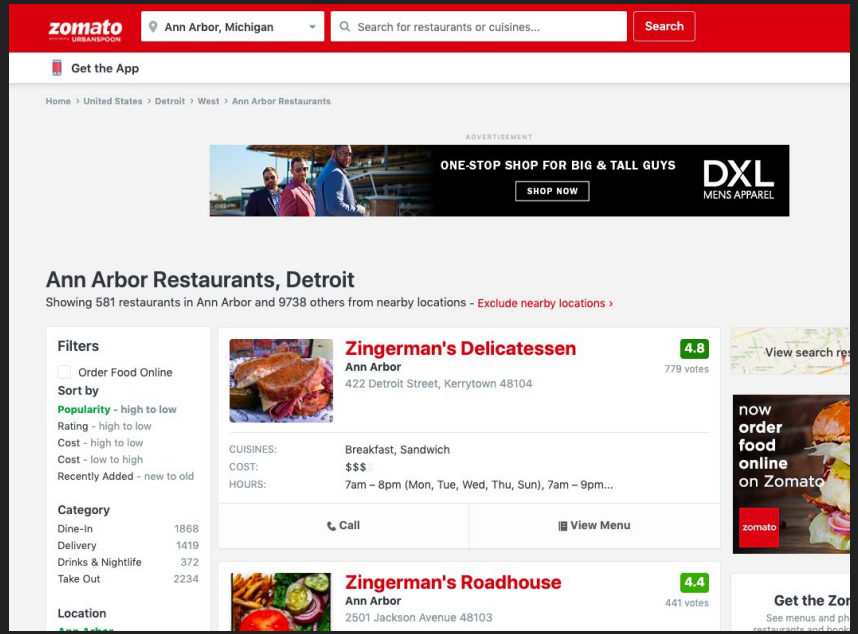
https://www.yelp.com/search?find_desc=&find_loc=Ann+Arbor%2C+MI&n



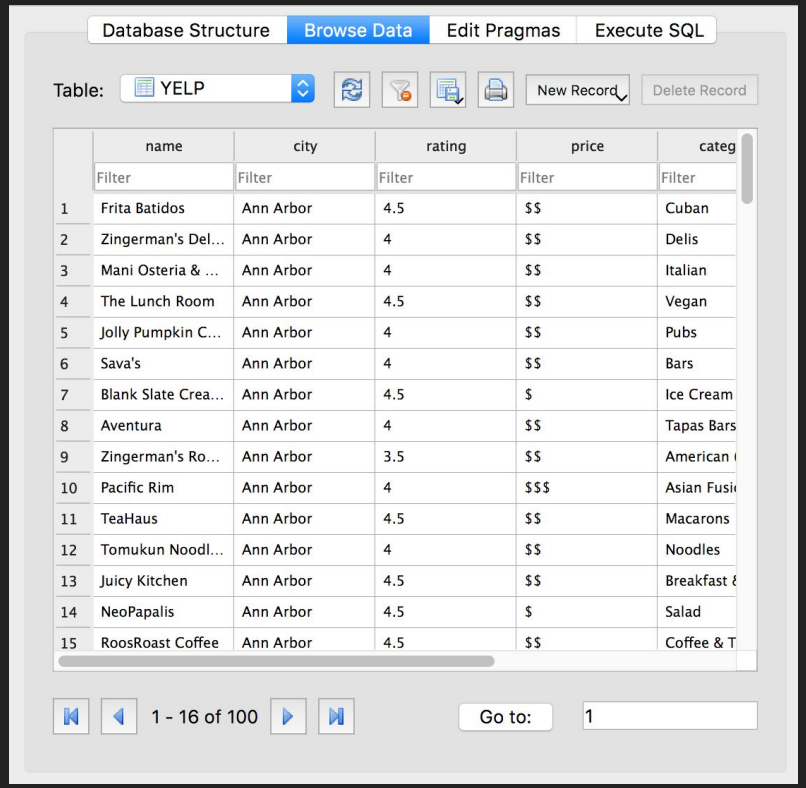
https://www.zomato.com/detroit/ann-arbor-restaurants

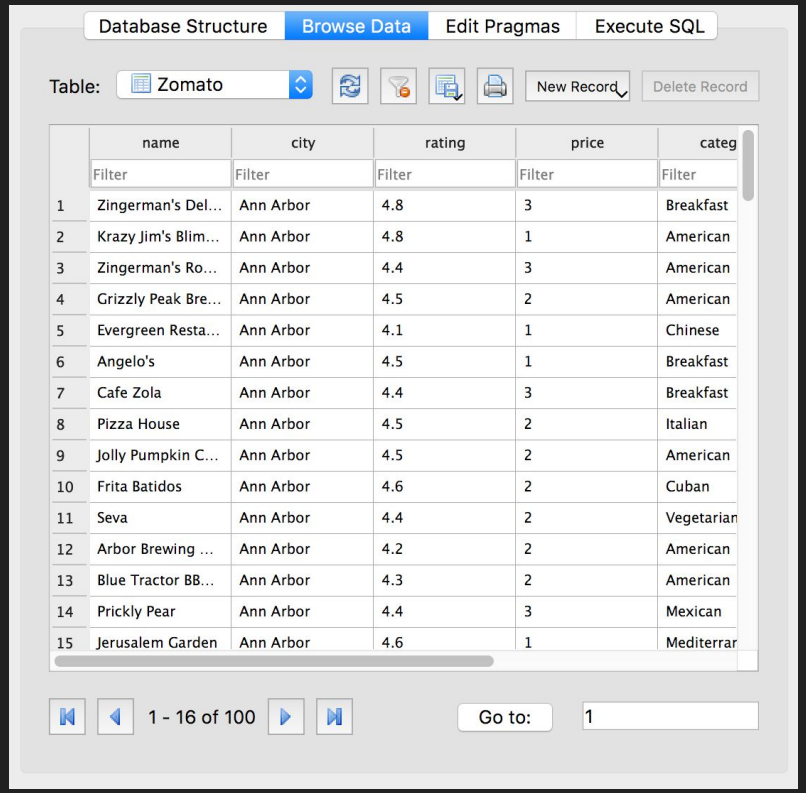


Goals:

- Number of restaurants in each restaurant category
- Category with the most restaurants
- Restaurant category with the highest average star rating
- Price range with the highest average star rating
- Overall average star rating and price range for all restaurants in the database

Database


Database Structure
Browse Data
Edit Pragmas
Execute SQL
Table: YELP
New Record
Delete Record
name
city
rating
price
categ
Filter
1 Frita Batidos Ann Arbor 4.5 $$ Cuban
2 Zingerman's Del... Ann Arbor 4 $$ Delis
3 Mani Osteria & ... Ann Arbor 4 $$ Italian
4 The Lunch Room Ann Arbor 4.5 $$ Vegan
5 Jolly Pumpkin C... Ann Arbor 4 $$ Pubs
6 Sava's Ann Arbor 4 $$ Bars
7 Blank Slate Crea... Ann Arbor 4.5 $ Ice Cream
8 Aventura Ann Arbor 4 $$ Tapas Bars
9 Zingerman's Ro... Ann Arbor 3.5 $$ American
10 Pacific Rim Ann Arbor 4 $$$ Asian Fusi
11 TeaHaus Ann Arbor 4.5 $$ Macarons
12 Tomukun Noodl... Ann Arbor 4 $$ Noodles
13 Juicy Kitchen Ann Arbor 4.5 $$ Breakfast &
14 NeoPapalis Ann Arbor 4.5 $ Salad
15 RoosRoast Coffee Ann Arbor 4.5 $$ Coffee & T
1 - 16 of 100
Go to: 1


Database Structure
Browse Data
Edit Pragmas
Execute SQL
Table: Zomato
New Record
Delete Record
name
city
rating
price
categ
Filter
1 Zingerman's Del... Ann Arbor 4.8 3 Breakfast
2 Krazy Jim's Blim... Ann Arbor 4.8 1 American
3 Zingerman's Ro... Ann Arbor 4.4 3 American
4 Grizzly Peak Bre... Ann Arbor 4.5 2 American
5 Evergreen Resta... Ann Arbor 4.1 1 Chinese
6 Angelo's Ann Arbor 4.5 1 Breakfast
7 Cafe Zola Ann Arbor 4.4 3 Breakfast
8 Pizza House Ann Arbor 4.5 2 Italian
9 Jolly Pumpkin C... Ann Arbor 4.5 2 American
10 Frita Batidos Ann Arbor 4.6 2 Cuban
11 Seva Ann Arbor 4.4 2 Vegetarian
12 Arbor Brewing ... Ann Arbor 4.2 2 American
13 Blue Tractor BB... Ann Arbor 4.3 2 American
14 Prickly Pear Ann Arbor 4.4 3 Mexican
15 Jerusalem Garden Ann Arbor 4.6 1 Mediterrar
1 - 16 of 100
Go to: 1

Calculations

Calculated number of restaurants in each restaurant category

Category with the most restaurants:

- Yelp: tie between “American (New)” (7), “Coffee & Tea” (7), and “Korean” (7)
- Zomato: “American” (28)

```
17  #function to get the number of restaurants in each category
18  #takes the column of categories as input
19  def get_num_of_rests_by_cat(category_data):
20      categories = dict()
21      for row in cur:
22          cat = row[0]
23          categories[cat] = categories.get(cat, 0) + 1
24      return categories
25      print(categories)
26  #YELP
27  categories_yelp = get_num_of_rests_by_cat(cur.execute("SELECT category FROM Yelp"))
28  categories_yelp = {"Yelp Restaurant Category Counts" : categories_yelp}
29
30  #ZOMATO
31  categories_zomato = get_num_of_rests_by_cat(cur.execute("SELECT category FROM Zomato"))
32  categories_zomato = {"Zomato Restaurant Category Counts" : categories_zomato}
```

Calculated average star rating based on restaurant category

Restaurant category with the highest average star rating:

- ~~Yelp: "Local Flavor" (5.0/5.0)~~ "Breakfast & Brunch" (4.75/5.0)
- Zomato: “Cuban” (4.6/5.0)

```
34  #Average Star Rating by Category
35  #takes the category and rating columns from the database as input
36  def get_rating_by_cat(data):
37      rating_by_cat = {}
38      for row in cur:
39          cat = row[0]
40          rating = row[1]
41          if cat in rating_by_cat:
42              rating_by_cat[cat].append(rating)
43          else:
44              rating_by_cat[cat] = [rating]
45      averages = {}
46      for cat in rating_by_cat:
47          avg = round(sum(rating_by_cat[cat])/len(rating_by_cat[cat]),2)
48          averages[cat] = avg
49      return averages
50
51  #YELP
52  rating_by_cat_yelp = get_rating_by_cat(cur.execute("SELECT category, rating FROM Yelp"))
53  rating_by_cat_yelp = {"Yelp Average Star Rating by Restaurant Category" : rating_by_cat_yelp}
54
55  #ZOMATO
56  rating_by_cat_zomato = get_rating_by_cat(cur.execute("SELECT category, rating FROM Zomato"))
57  rating_by_cat_zomato = {"Zomato Average Star Rating by Restaurant Category" : rating_by_cat_zomato}
58
```

Calculated average star rating based on price range

Price range with the highest average star rating:

- Yelp: 1 out of 4 / $ out of $$$$
- Zomato: 4 out of 4 / $$$$ out of $$$$

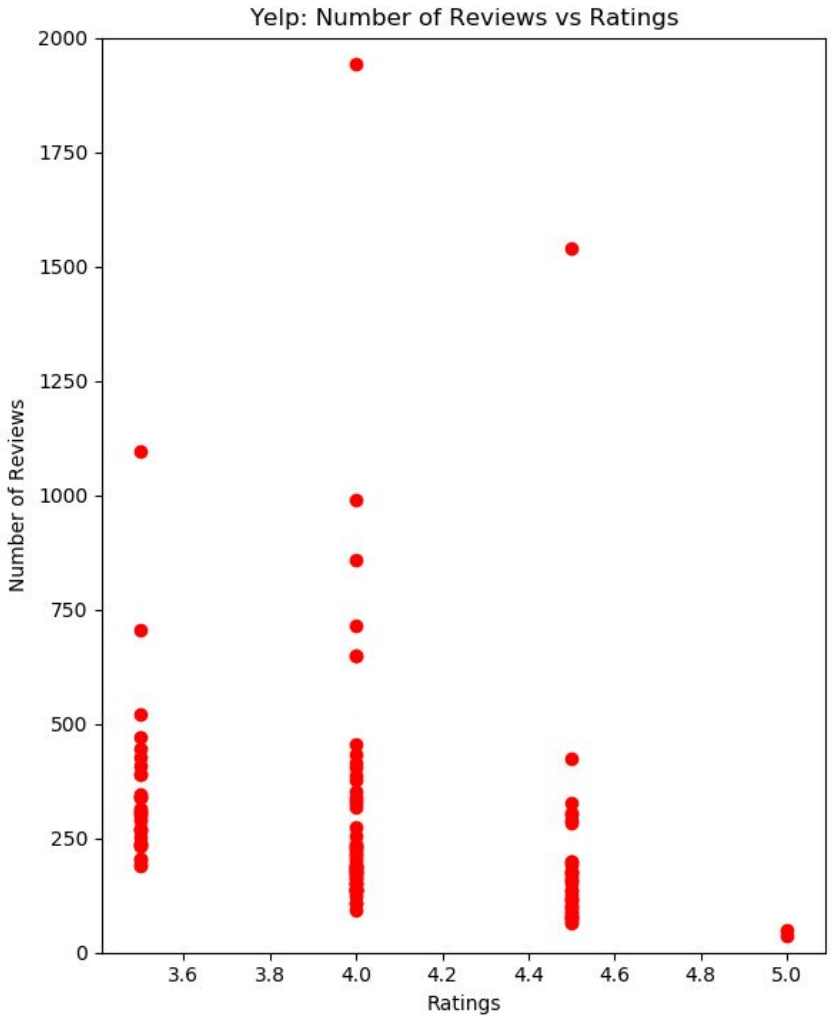
```
#Average star rating based on price range
#takes the star rating and price range columns from the database as input
def get_rating_by_price(data):
    rating_by_price = dict()
    for row in cur:
        rating = row[0]
        price = row[1]
        if price in rating_by_price:
            rating_by_price[price].append(rating)
        else:
            rating_by_price[price] = [rating]
    averages = {}
    for price in rating_by_price:
        ratings = rating_by_price[price]
        avg = sum(ratings)/len(ratings)
        averages[price] = round(avg, 2)
    return averages

#YELP
rating_by_price_yelp = get_rating_by_price(cur.execute("SELECT rating, price FROM Yelp"))
rating_by_price_yelp = {"Yelp Average Star Rating by Price Range" : rating_by_price_yelp}

#ZOMATO
rating_by_price_zomato = get_rating_by_price(cur.execute("SELECT rating, price FROM Zomato"))
rating_by_price_zomato = {"Zomato Average Star Rating by Price Range" : rating_by_price_zomato}
```

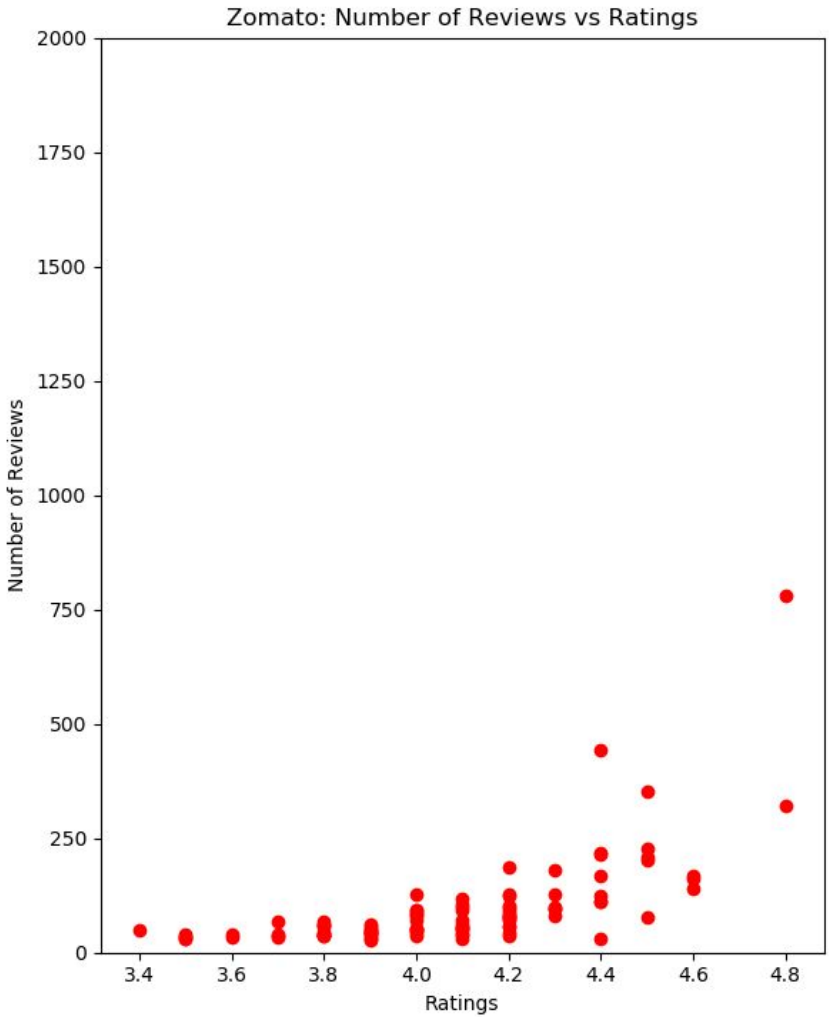
Calculated overall average star rating

- Yelp: 4.0292 / 5
- Zomato: 4.071 / 5

```
85  #Overall average star rating for all restaurants
86  def get_overall_average_rating(ratings):
87      ratings = list()
88      for row in cur:
89          ratings.append(row[0])
90      avg_rating = round(sum(ratings)/len(ratings),4)
91      return avg_rating
92
93  #YELP
94  overall_avg_rating_yelp = get_overall_average_rating(cur.execute("SELECT rating FROM Yelp"))
95  overall_avg_rating_yelp = {"Yelp Overall Average Star Rating for All Restaurants" : overall_avg_rating_yelp}
96
97  #ZOMATO
98  overall_avg_rating_zomato = get_overall_average_rating(cur.execute("SELECT rating FROM Zomato"))
99  overall_avg_rating_zomato = {"Zomato Overall Average Star Rating for All Restaurants" : overall_avg_rating_zomato}
```

Visualizations


Yelp: Number of Reviews vs Ratings
Number of Reviews
Ratings
0
250
500
750
1000
1250
1500
1750
2000
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0


Zomato: Number of Reviews vs Ratings
Number of Reviews
Ratings
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250
500
750
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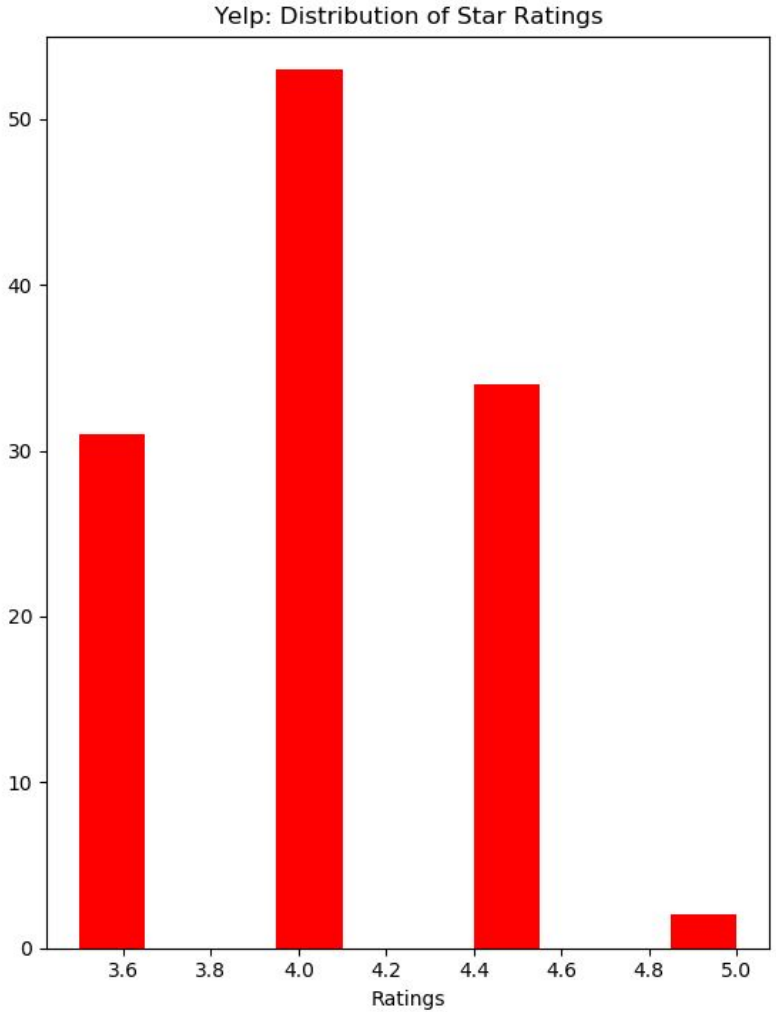
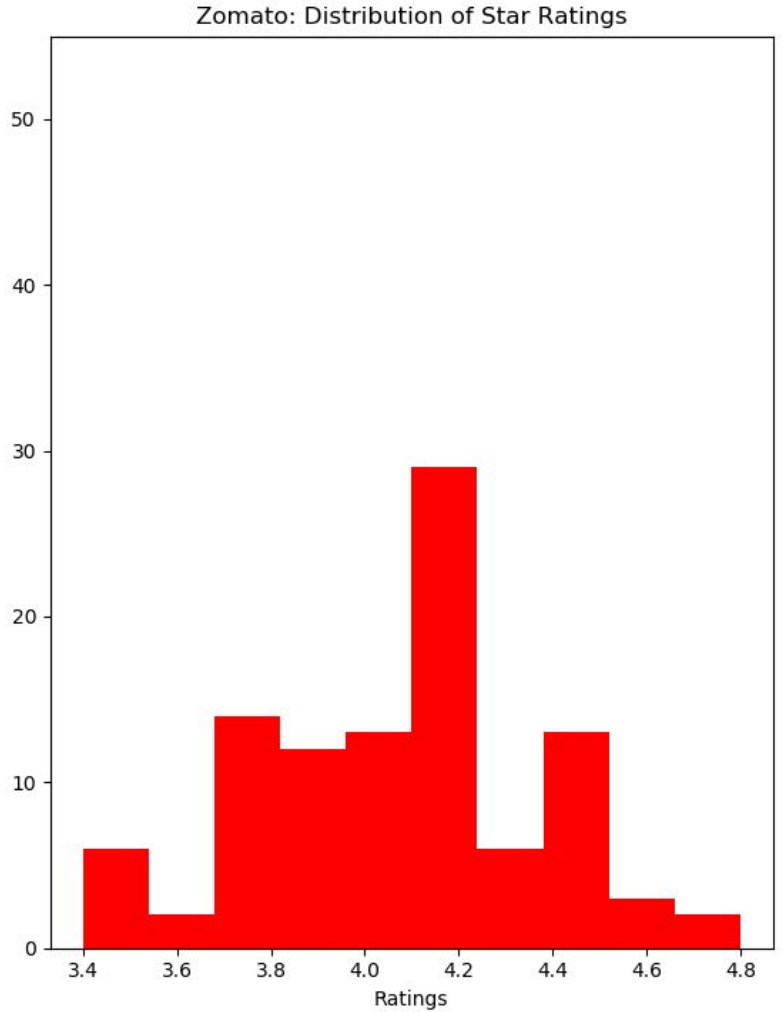
3.8
4.0
4.2
4.4
4.6
4.8


Yelp: Distribution of Star Ratings
0
10
20
30
40
50
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Ratings


Zomato: Distribution of Star Ratings
0
10
20
30
40
50
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
Ratings

Questions?