Business Problem to Solve

How to utilize customer review to help restaurant business

Problem Statement

1. How do subcategories improve Yelp popularity?
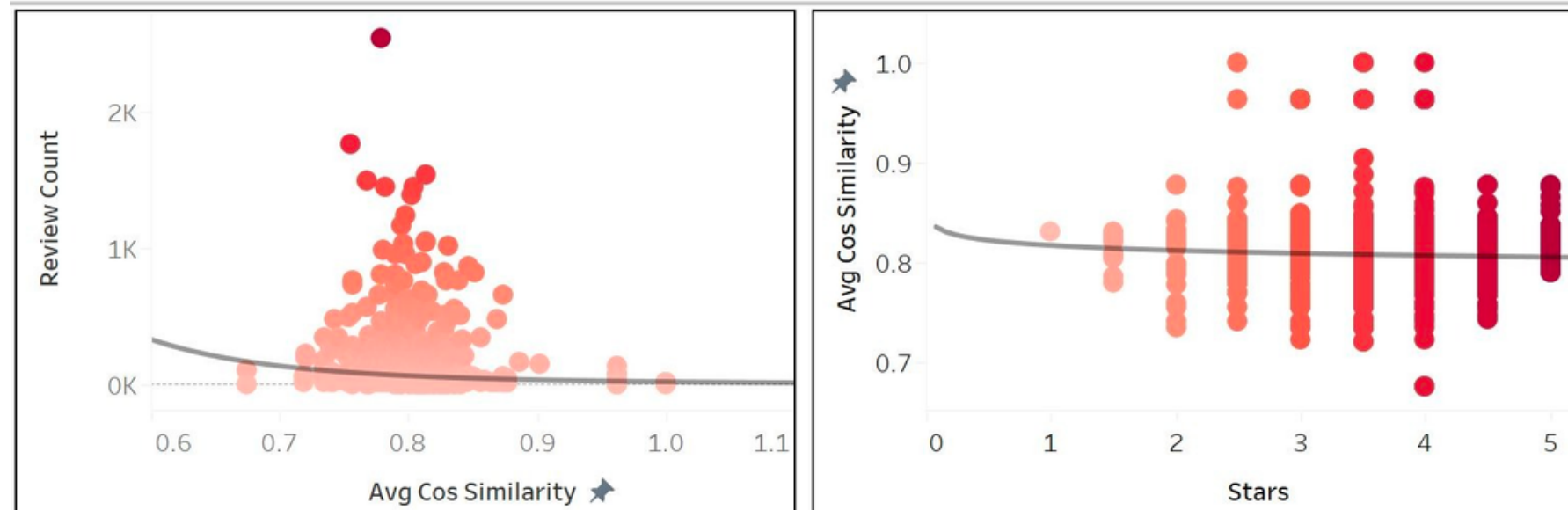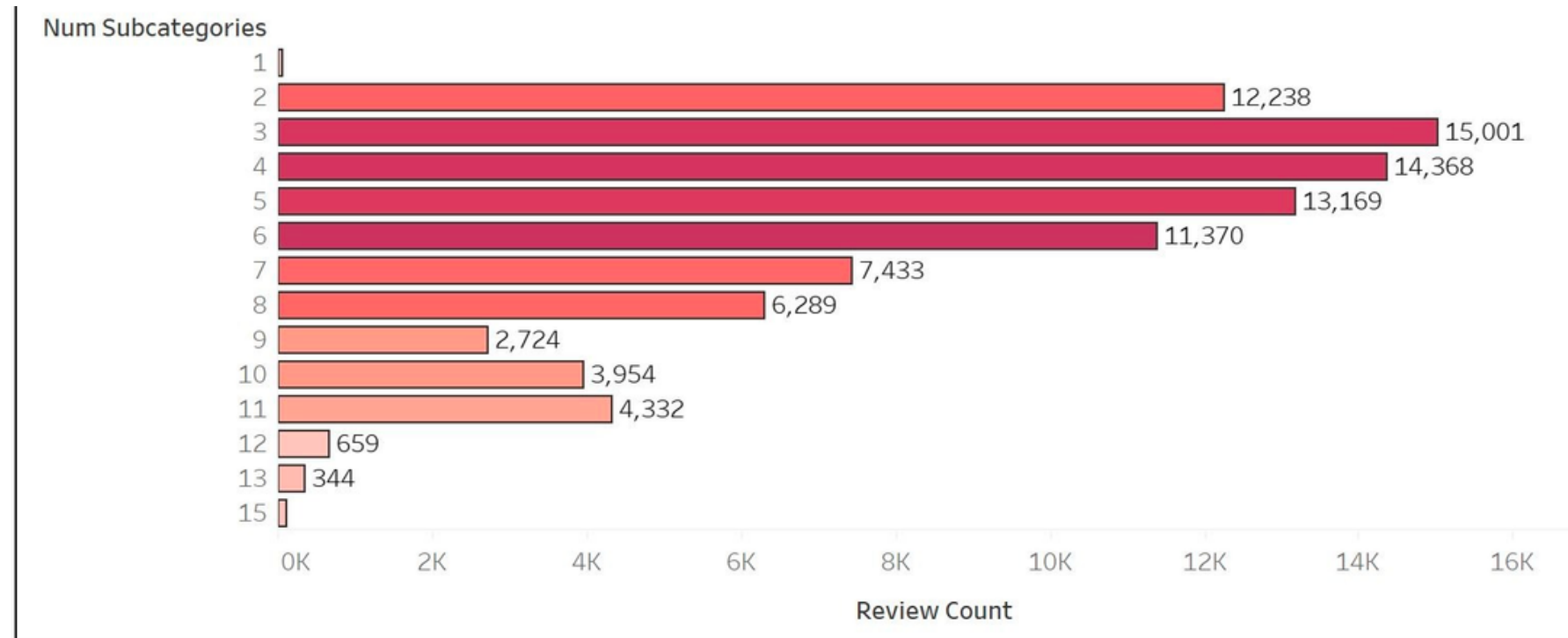2. What do customers expect from restaurants?

Algorithms Used

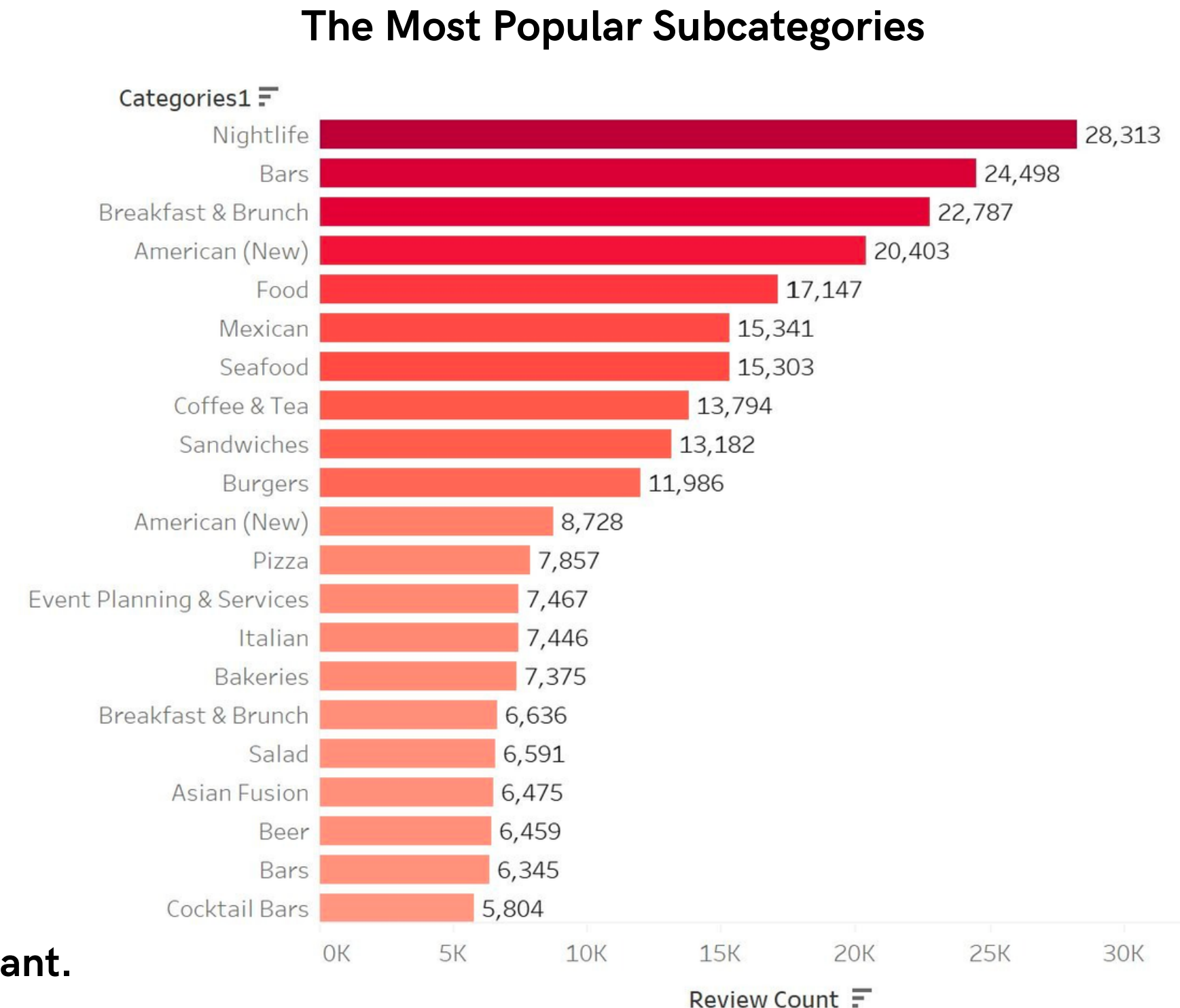Sentimental Analysis
Cosine Similarity

Approach

Business Understanding

Text Data Cleaning

EDA

Sentimental Analysis

Associate category amount with review count and sentimental scores

Recommendations on subcategories

The Most Popular Subcategories

Num Subcategories (Review Count):
- 1
- 2: 12,238
- 3: 15,001
- 4: 14,368
- 5: 13,169
- 6: 11,370
- 7: 7,433
- 8: 6,289
- 9: 2,724
- 10: 3,954
- 11: 4,332
- 12: 659
- 13: 344
- 15

The Most Popular Subcategories (Review Count):
- Nightlife: 28,313
- Bars: 24,498
- Breakfast & Brunch: 22,787
- American (New): 20,403
- Food: 17,147
- Mexican: 15,341
- Seafood: 15,303
- Coffee & Tea: 13,794
- Sandwiches: 13,182
- Burgers: 11,986
- American (New): 8,728
- Pizza: 7,857
- Event Planning & Services: 7,467
- Italian: 7,446
- Bakeries: 7,375
- Breakfast & Brunch: 6,636
- Salad: 6,591
- Asian Fusion: 6,475
- Beer: 6,459
- Bars: 6,345
- Cocktail Bars: 5,804

- More subcategories listed on Yelp don't necessarily mean higher popularity. The optimal number of subcategories is 2-4.
- Choosing subcategories wisely to list on Yelp or start new restaurant.

How to improve?

Positive Review

Negative Review

if a restaurant want to improve its customer review rating, they should focus on customer waiting issue, improve customer experience by providing better training to its server.