

Abstract geometric lines in the top-left corner of the page, consisting of several thin, black, overlapping lines that form a complex, non-representational shape.

# AZUL SENTIMENT REVIEW ANALYSIS

Jericho Timbol

# RESEARCH OVERVIEW

## Google Review Scrape

All 1600+ data records scraped and created from Google Reviews as of September 22 2023.



| author            | review_body                                   | review_rating | review_tags                | category_rating                               | date          |
|-------------------|---|---------------|----------------------------|---|---------------|
| Gilberto Gonzalez | Food : 4/5   Service : 4/5   Atmosphere : 4/5 | 4             | Dine in   Dinner   \$20–30 | Food : 4/5   Service : 4/5   Atmosphere : 5/5 | 10 months ago |
| J'Dnt Vega        | I went for brunch with the family and         | 4             |                            |   | 7 years ago   |
| Chris Griggs      | Good happy hour, great food, and ma           | 5             |                            |   | 2 years ago   |
| Art Wheatley      | Love the salsa and chips Food : 5/5           | 5             |                            | Food : 5/5   Service : 5/5   Atmosphere : 5/5 | a week ago    |

## Guiding Questions

- How do review ratings relate to category ratings?
  - Avg rating for categories by star review?
- Do dining time reviews show any trends?
- Sentiment review on body of the review
  - Negative but positive vice versa

```
%%sql
SELECT * FROM reviews_raw
WHERE review_body ILIKE '%Jericho%';

[28] ✓ 0.0s
```

| author          | review_body                           | review_rating | review_tags |
|-----------------|---------------------------------------|---------------|-------------|
| Joseph Sullivan | Excellent waiter his name was Jericho | 5             | Dine in     |

# DATASET OVERVIEW

**author:** Name of reviewer

**review\_body:** This column contains the textual content of the restaurant reviews.

Increidble menu and great service. Can be a little crowded and some items are more expensive than they should be, but I'm never disappointed with the food and so always satisfied with the bill Food : 5/5 | Service : 5/5 | Atmosphere : 5/5

**review\_rating:** This column appears to represent the numeric ratings given by the reviewers to the restaurant. Ratings are typically used to express the overall satisfaction of the reviewers with their dining experience.

**review\_tags:** It seems that this column might contain additional descriptive tags or labels related to the restaurant reviews.

Dine in | Lunch | \$10–20

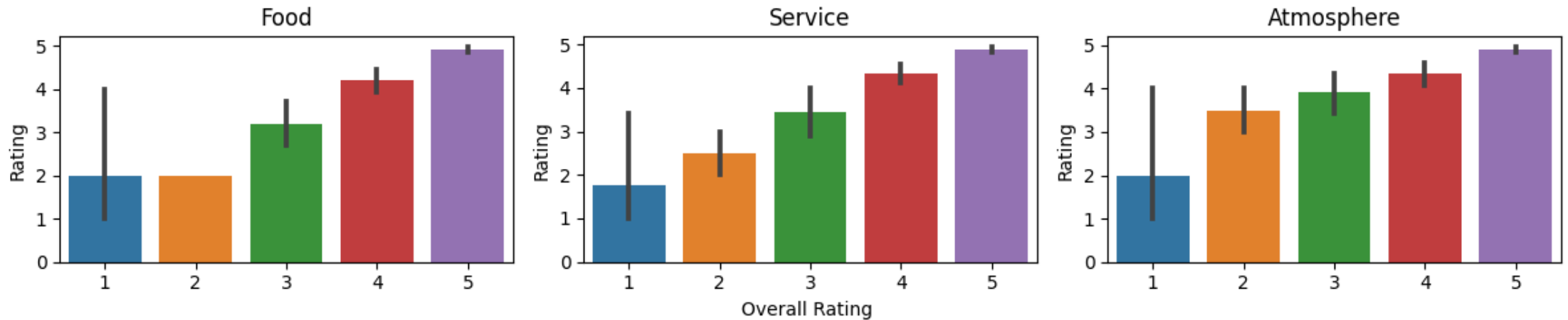
**category\_rating:** This column possibly contains ratings or scores related to specific categories or aspects of the restaurant

Food : 4/5 | Service : 4/5 | Atmosphere : 5/5

**date:** Date when the restaurant reviews were posted or written by the reviewers. The dates could be in various formats, such as "5 years ago," "3 years ago," "4 years ago," "3 months ago," "a year ago," and "10 months ago"

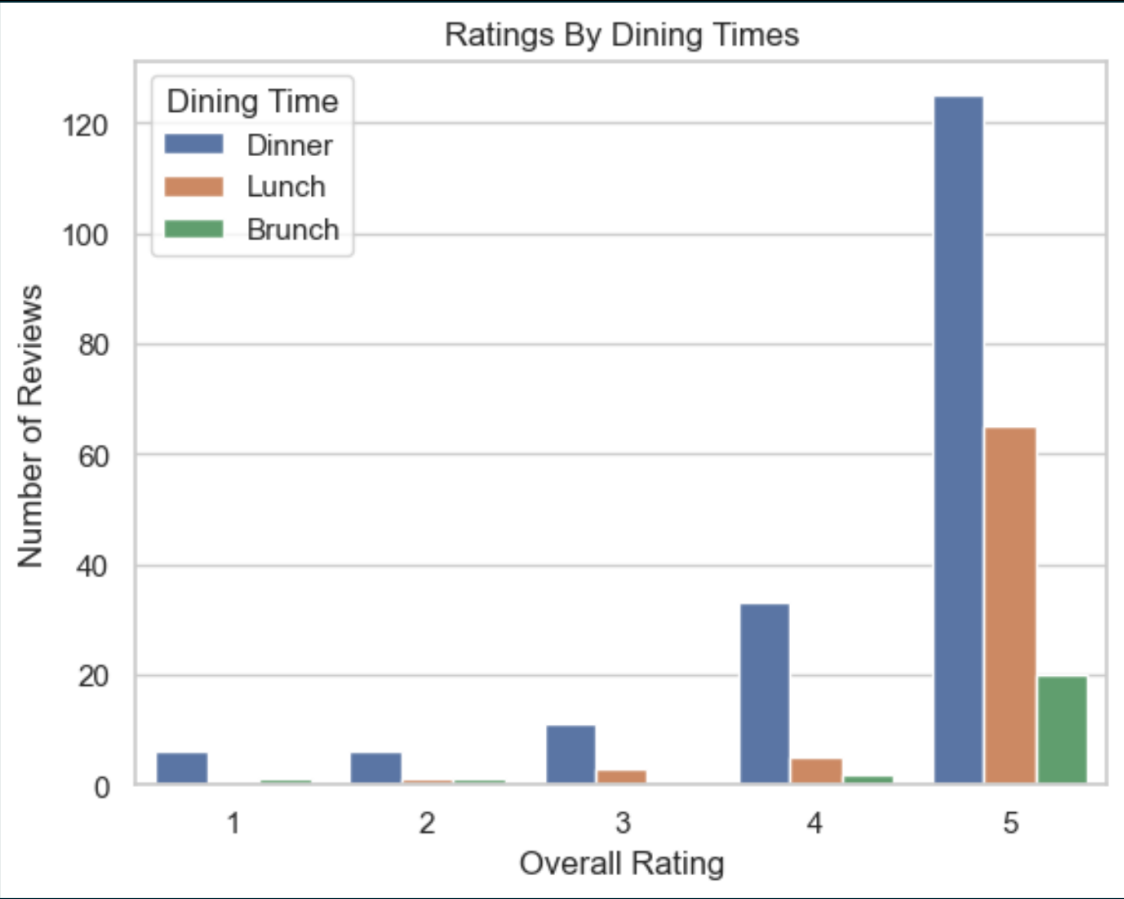
# FOOD, SERVICE, AND ATMOSPHERE ANALYSIS

Category Ratings Based on Overall Rating



|         | atmosphere_rating | food_rating | service_rating |
|---------|-------------------|-------------|----------------|
| 1       | 2.00              | 2.00        | 1.75           |
| 2       | 3.50              | 2.00        | 2.50           |
| 3       | 3.91              | 3.18        | 3.45           |
| 4       | 4.36              | 4.20        | 4.32           |
| 5       | 4.90              | 4.92        | 4.87           |
| Overall | 4.69              | 4.64        | 4.62           |

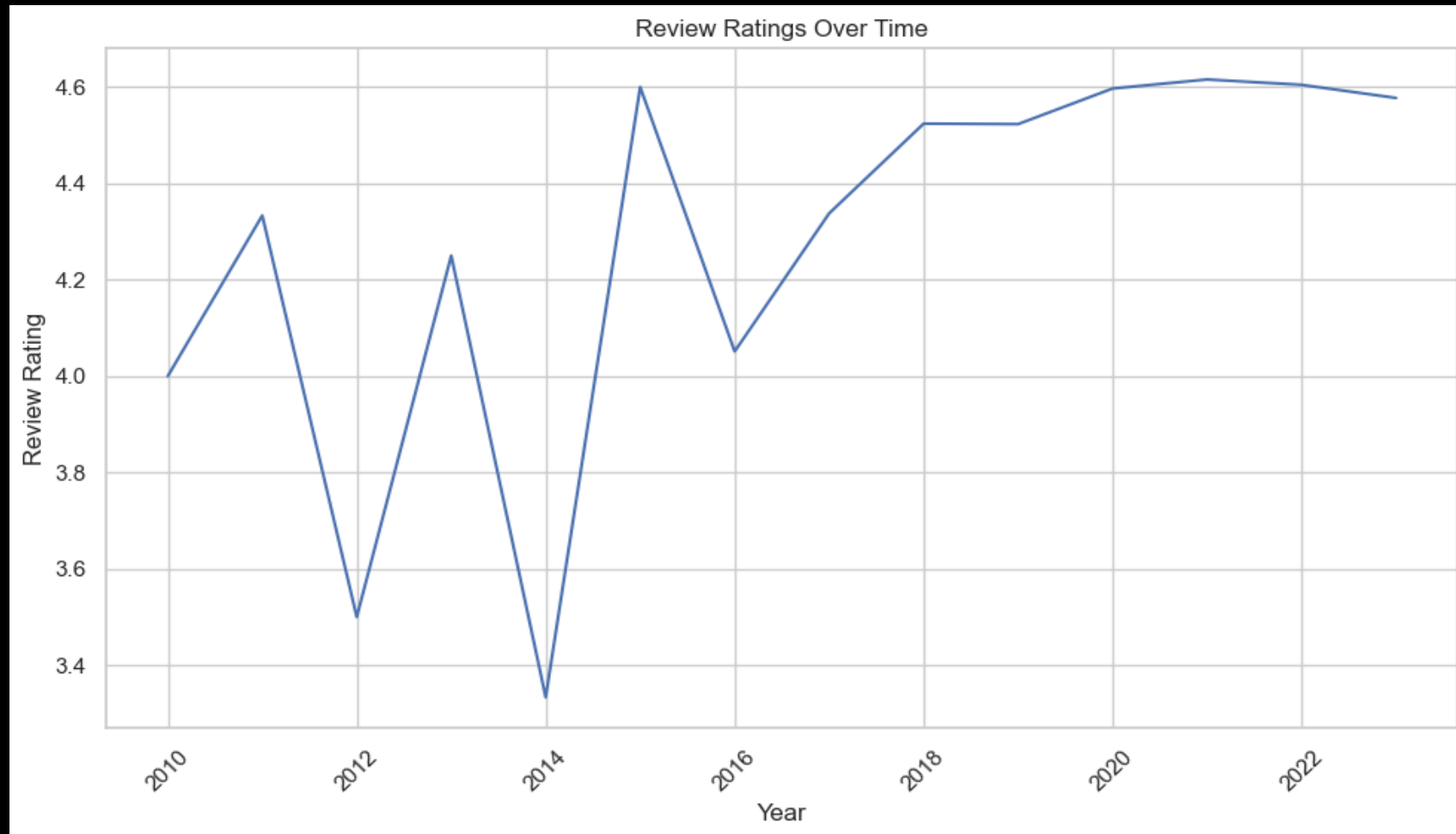
# DINING TIME ANALYSIS



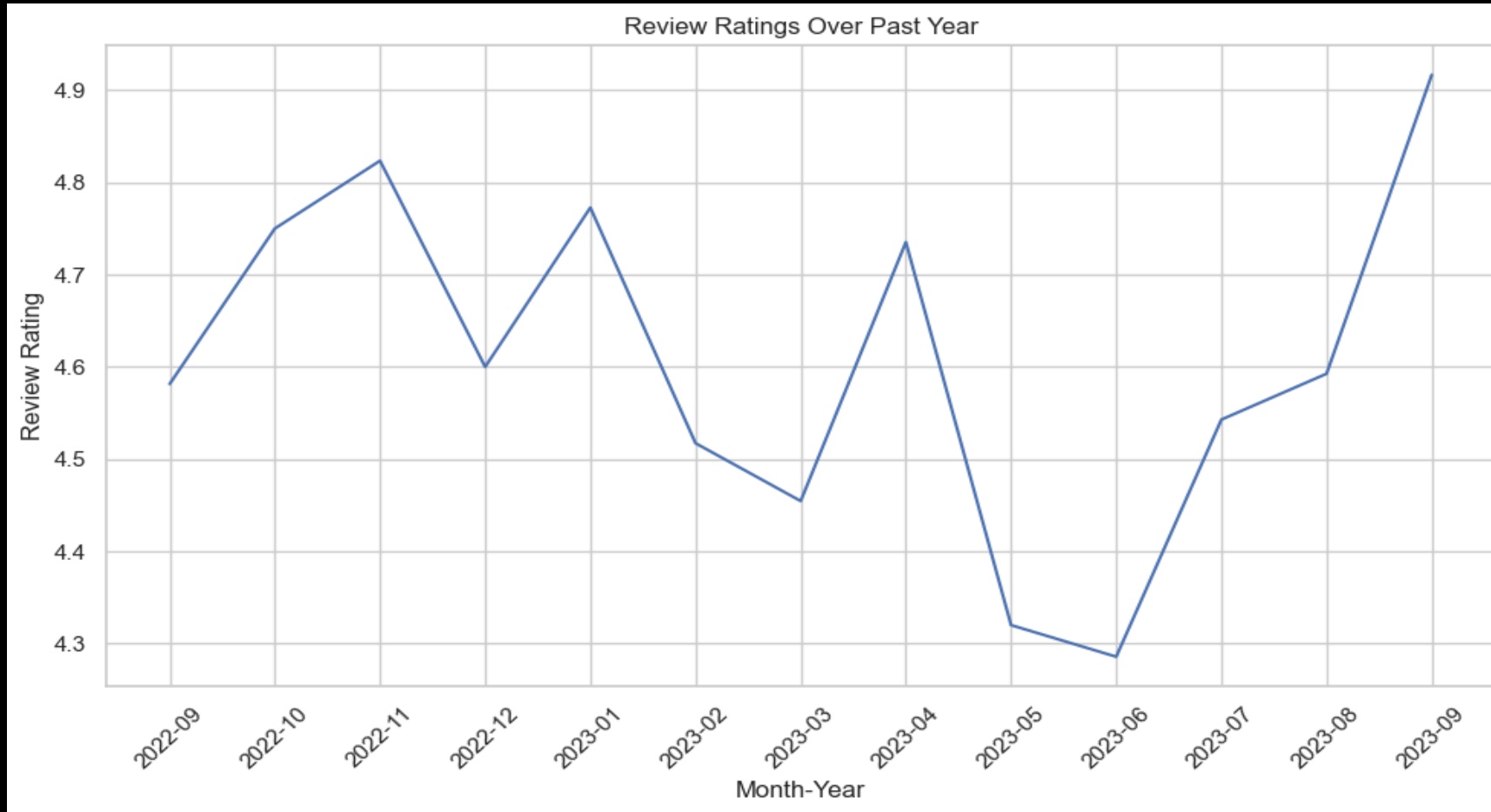
| review_rating | 1     | 2     | 3     | 4      | 5      |
|---------------|-------|-------|-------|--------|--------|
| dining_time   |       |       |       |        |        |
| Brunch        | 4.17% | 4.17% | 0.00% | 8.33%  | 83.33% |
| Dinner        | 3.31% | 3.31% | 6.08% | 18.23% | 69.06% |
| Lunch         | 0.00% | 1.35% | 4.05% | 6.76%  | 87.84% |

| dining_time | Brunch | Dinner   | Lunch    |
|-------------|--------|----------|----------|
| Avg Rating  | 4.625  | 4.464088 | 4.810811 |

# RATINGS OVER TIME



# RATINGS OVER TIME



The Mean Review Rating is: 4.54

The Mean Beginning of Summer (May – July Inclusive) Review Rating is: 4.41

The Percent Decrease during this time is: 2.86

# SENTIMENT ANALYSIS

## ROBERTA NATURAL LANGUAGE PROCESSING MODEL

- RoBERTa is a transformer-based language model that uses self-attention to process input sequences and generate contextualized representations of words in a sentence.
- Scored on a criteria of 0 – 1 on the relation to neutrality, positivity and negativity.

## TESTING

> Positive Input : ('Jericho was absolutely amazing. The food was just what I needed!')

```
{'roberta_neg': 0.0017027779, 'roberta_neu': 0.008567015, 'roberta_pos': 0.98973024}
```

> Mixed Input : ('Jericho was a good server but the carne asada was mediocre')

```
{'roberta_neg': 0.56492746, 'roberta_neu': 0.3689242, 'roberta_pos': 0.06614835}
```

> Negative Input : ('Eating at Azul was not ideal. The food was bland and Jericho, our server, was farting constantly in front of the tables')

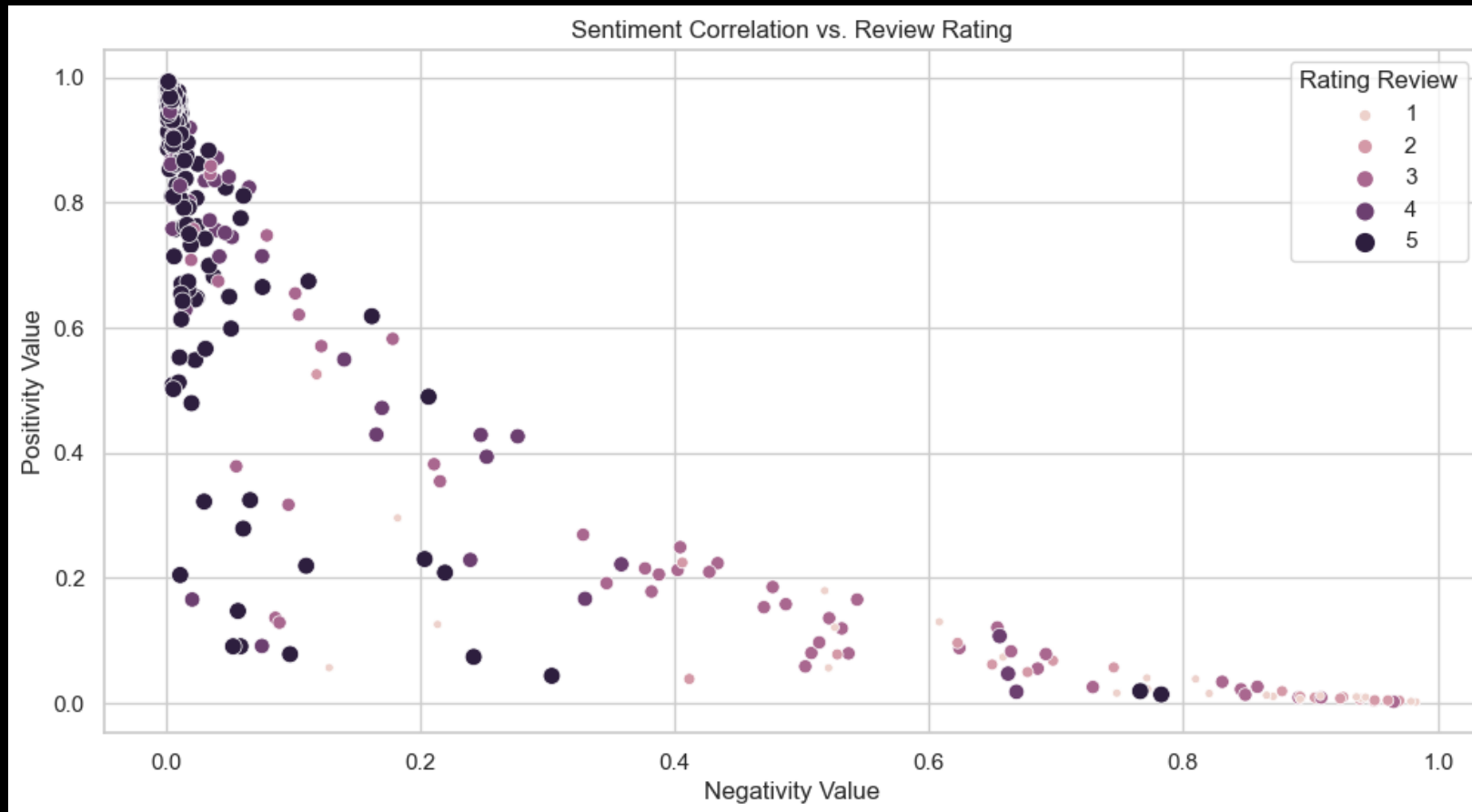
```
{'roberta_neg': 0.96264356, 'roberta_neu': 0.034272406, 'roberta_pos': 0.0030840512}
```



# VISUALIZING SENTIMENTS



# VISUALIZING SENTIMENTS



# WORD CLOUD ANALYSIS

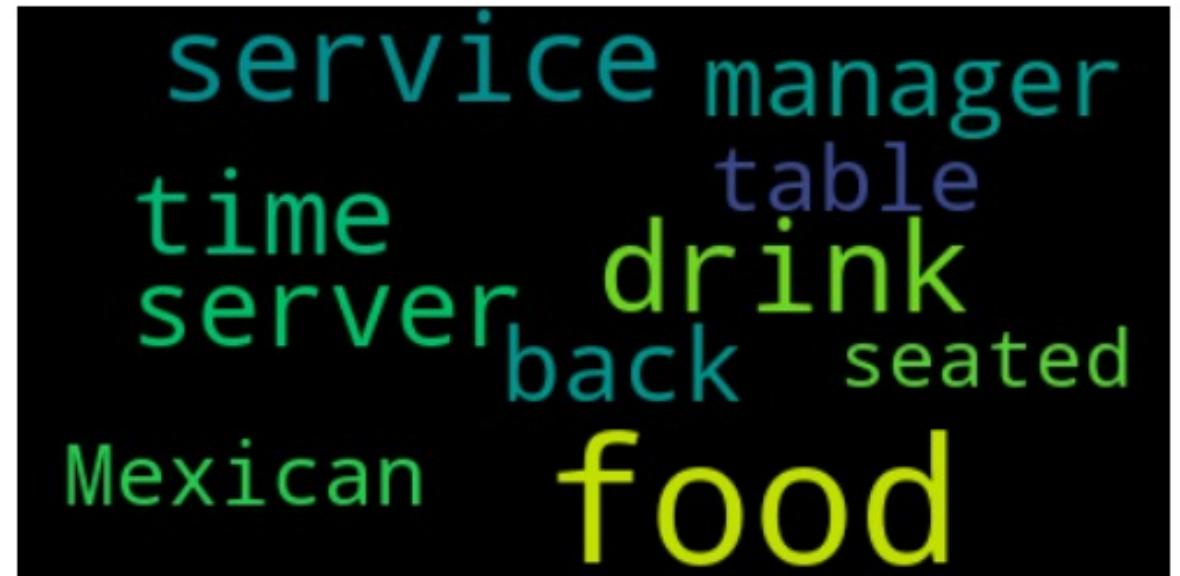
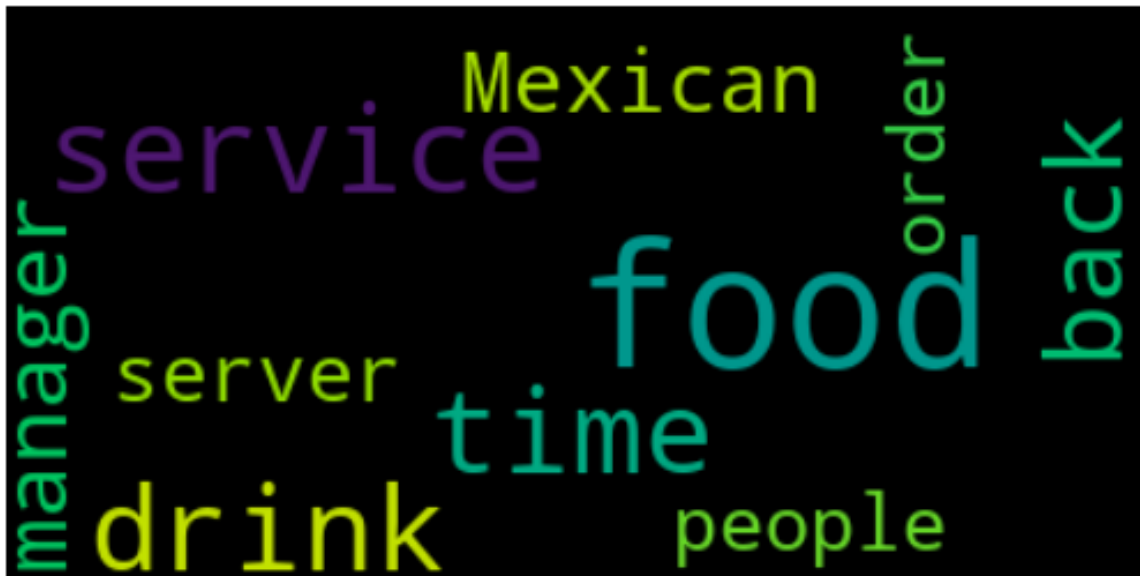
All Reviews Cloud

\* There are 143422 words in the combination of all review.



# NEGATIVE WORD CLOUD

- There are 21123 words in the combination of negative review.
  - Neg Value > .5
- There are 16320 words in the combination of negative review.
  - Review Rating <= 2



# ROBERTA VALUE VS RATING ANALYSIS

- Sorted Reviews with highest negativity ratings

ID: 38

Review Rating: 1

Roberta Neg: 0.9829794764518738

Review Body: Manager did not allow us to sit because we changed tables from the bar to regular seating. Clowns. This place is disgusting. Horrible service. Do not recommend

ID: 761

Review Rating: 1

Roberta Neg: 0.9790721535682678

Review Body: Food tasted subpar. Got food poisoning immediately after. Will never go there again.

ID: 244

Review Rating: 2

Roberta Neg: 0.9697834253311157

Review Body: Horrible service. Horrible food. It was a complete waste of time and waste of money. I had my hopes up to eat authentic Mexican food. I'm not sure if this is some sort of Mexican fusion establishment but it is definitely not what I expected. They serve Asada with mashed potatoes and green beans! The salsa in comes one way and that is mild. I was really hoping to like this place, but I was let down. Seating is a little cramped towards the back of the restaurant.

ID: 663

Review Rating: 3

Roberta Neg: 0.9653684496879578

Review Body: Disappointed. They do not allow dogs on the patio.

# ROBERTA VALUE VS RATING ANALYSIS

- Sorted Reviews 4 star or higher and by highest negativity ratings

ID: 943

Review Rating: 5

Roberta Neg: 0.7661157250404358

Review Body: I am sad. I used to order the carne asada all of the time, either on the salad or the entree. My waitstaff recently indicated to me that it is not gluten free. Historically, however, I had asked at least a few times over the years if it was, and servers had always indicated it was. I don't know if this is actually a new thing or my previous servers told me incorrect information. So, beware, the carne asada is NOT gluten free, even if you've ordered it for years. Dietary restrictions: Carne asada is not gluten free. There are a handful of gluten free items, but that is not one of them.

ID: 1021

Review Rating: 4

Roberta Neg: 0.668793261051178

Review Body: Quality, an infrequent visitor unfortunately because of the little on

ID: 735

Review Rating: 4

Roberta Neg: 0.6622179746627808

Review Body: Good food, but doesn't match the price point, average servic

ID: 798

Review Rating: 4

Roberta Neg: 0.6555929780006409

Review Body: In all fairness, I know allot of people who absolutely love this place. As for myself, I feel its only decent at best. The inside of the restaurant does have a nice well polished, upscale feel, but that's where the fun stops for me. Long wait times, overpriced mediocre food and drinks, and poor service is what will prevent me from going back in the future. People can throw their money and time at this place, mine will be spent at another restaurant down the street.

# ROBERTA VALUE VS RATING ANALYSIS

- Sorted Reviews 2 star or lower and by highest positivity ratings

ID: 239

Review Rating: 2

Roberta Pos: 0.5253500938415527

Review Body: Ordered the Chop Chop Salad and the Taco special from their Special Menu. The Salad was rather bland. Our server was nice to replace the ground beef with stake if she took away 2 sides that would normally accompany the special. It sounded too complicated but it was nice of her to accommodate the request. I also had a glass of their Red Sangria which was too sweet and did not taste any alcohol. You might want to sneak in your own Tequila like the college days.

ID: 644

Review Rating: 1

Roberta Pos: 0.29588231444358826

Review Body: Came in for happy hour for a 21st birthday and sat for a while. Bartender brought us waters and let us know our server Emily would be right with us. I noticed her pause her conversation as she saw we sat in her section. Given her body language it was apparent she was VERY invested in her conversation with a gentlemen. She didn't come to the table so we left :/ shame, I was looking forward to trying Azul. ----- IN RESPONSE TO OWNER ----- I respect you trying to protect your business and perhaps I misheard the name of your server but this doesn't excuse the service (or lack of) that I received. This was at Azul Restaurant & Lounge in the Mill Creek Town Center. This was Monday August 12th, she was blonde. And we came in around 10:30-45 and left at about 11 if you have cameras to reference. But thanks for taking the time to acknowledge my review.

ID: 1550

Review Rating: 2

Roberta Pos: 0.2247304469347

Review Body: Food was really below expectations. We went there based on high ratings but really disappointed with food. The service and ambiance was good. There are some really good Mexican restaurant in the vicinity I will prefer them any day over Azul

A series of white, thin, overlapping geometric lines on a black background, forming a complex, abstract pattern on the left side of the slide.

THANK YOU

ANY QUESTIONS?  
CURIOSITIES?  
INQUIRIES?