

Restaurants Data Analysis Presentation

Given By: Cognifyz Technology

Presented by: Saquib Ahmad

Company Detail



- Cognifyz Technologies is a leading technology company that specializes in the dynamic field of data science and excels in delivering impactful projects and solution.
- The company offers a wide range of products and services, including artificial intelligence (AI), machine learning (ML), and data analytics tools.
- Cognifyz Technologies also provides training programs to enhance skills and knowledge in these areas.
- The company focuses on delivering innovation and cutting-edge solutions to meet the evolving needs of business.

Project Overview

This project presents an in-depth analysis of a comprehensive dataset focusing on various aspects of the restaurant industry. From popular cuisines to city-wise restaurant distribution, pricing trends, service offerings, and customer satisfaction levels, our analysis provides valuable insights for restaurant owners, managers, and stakeholders. By leveraging data-driven insights, we aim to optimize operational efficiency, enhance marketing strategies, and elevate overall dining experiences. Explore our findings to gain valuable insights into the dynamic landscape of the restaurant industry.



The Importance of Restaurant Food



1. **Social Connection:** Restaurants foster connections and gatherings among people.
2. **Cultural Exploration:** They offer opportunities to explore diverse cuisines.
3. **Economic Impact:** Restaurants drive economic activity and employment.
4. **Convenience and Leisure:** They provide convenience and leisure for dining.
5. **Celebration and Experience:** Dining out creates memorable experiences for special occasions.
6. **Innovation and Creativity:** Restaurants inspire culinary innovation and trends.
7. **Health and Well-being:** Promoting healthier eating habits is crucial for overall well-being.



RESTAURANTS DATA ANALYSIS

LEVEL- 1

Task - 1

TASK: Top Cuisines

- Determine the top three most common cuisines in the dataset.
- Calculate the percentage of restaurants that serve each of the top cuisines.

Task - 2

TASK: City Analysis

- Identify the city with the highest number of restaurants in the dataset.
- Calculate the average rating for restaurants in each city.
- Determine the city with the highest average rating.



LEVEL- 1

Task - 3

TASK: Price Range Distribution

- Create a histogram or bar chart to visualize the distribution of price ranges among the restaurants.
- Calculate the percentage of restaurants in each price range category.

Task - 4

TASK: Online Delivery

- Determine the percentage of restaurants that offer online delivery.
- Compare the average ratings of restaurants with and without online delivery.

RESTAURANTS DATA ANALYSIS



RESTAURANTS DATA ANALYSIS



LEVEL- 2

Task - 1

TASK: Restaurant Ratings

- Analyze the distribution of aggregate ratings and determine the most common rating range.
- Calculate the average number of votes received by restaurants.

Task - 2

TASK: Cuisine Combination

- Identify the most common combinations of cuisines.
- Determine if certain cuisine combinations tend to have higher ratings.

RESTAURANTS DATA ANALYSIS

LEVEL- 2

Task - 3

TASK: Geographic Analysis

- Plot the locations of restaurants on a map using longitude and latitude coordinates.
- Identify any patterns or clusters of restaurants in specific areas.

Task - 4

TASK: Restaurant Chains

- Identify if there are any restaurant chains present in the dataset.
- Analyze the ratings and popularity of different restaurant chains.



LEVEL- 3

Task - 1

TASK: Restaurant Reviews

- Analyze the text reviews to identify the most common positive and negative keywords.
- Calculate the average length of reviews and explore if there is a relationship between review length and rating.

Task - 2

TASK: Votes Analysis

- Identify the restaurants with the highest and lowest number of votes.
- Analyze if there is a correlation between the number of votes and the rating of a restaurant.

RESTAURANTS DATA ANALYSIS



RESTAURANTS DATA ANALYSIS



LEVEL- 3

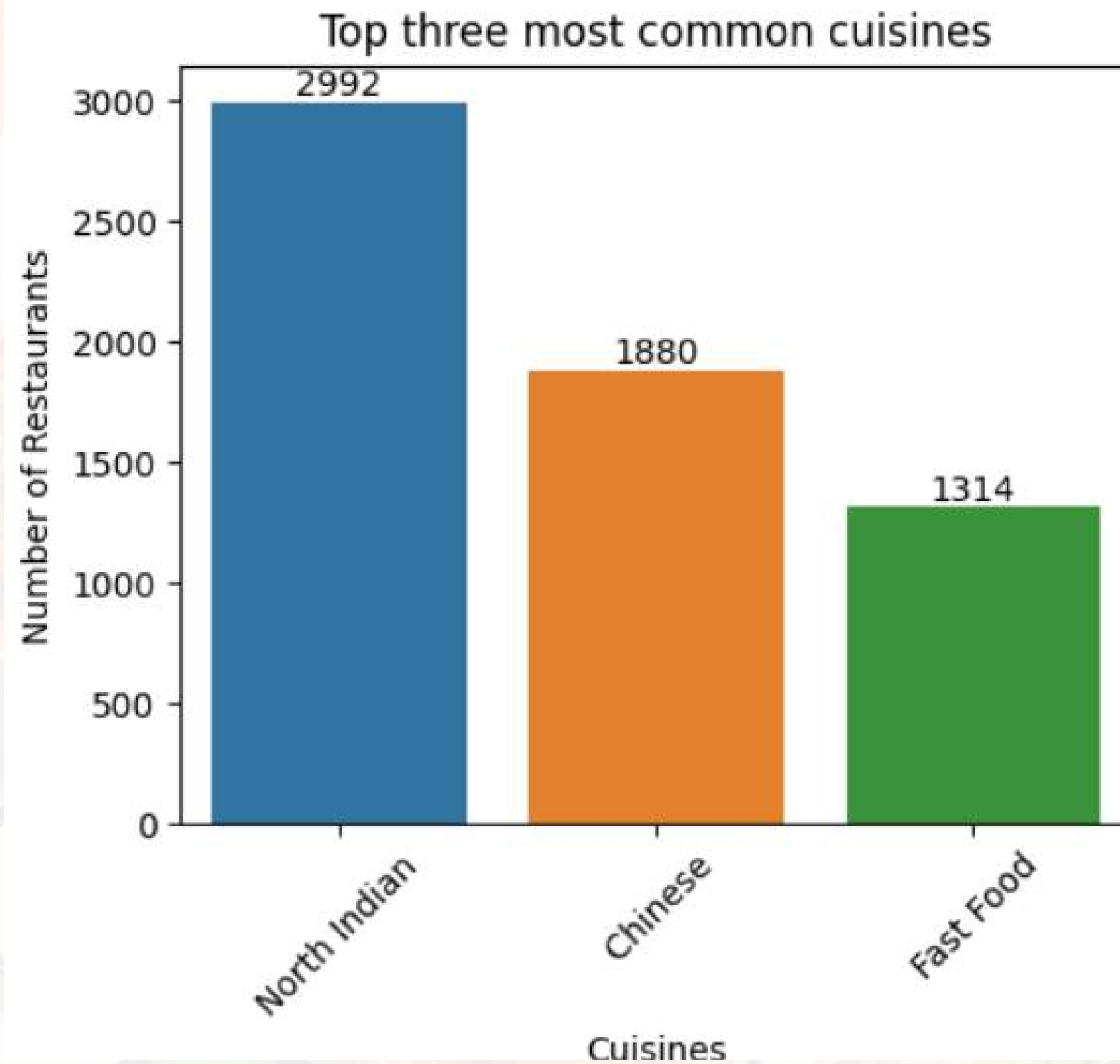
Task - 3

TASK: Price Range vs. Online Delivery and Table Booking

- Analyze if there is a relationship between the price range and the availability of online delivery and table booking.
- Determine if higher-priced restaurants are more likely to offer these services.

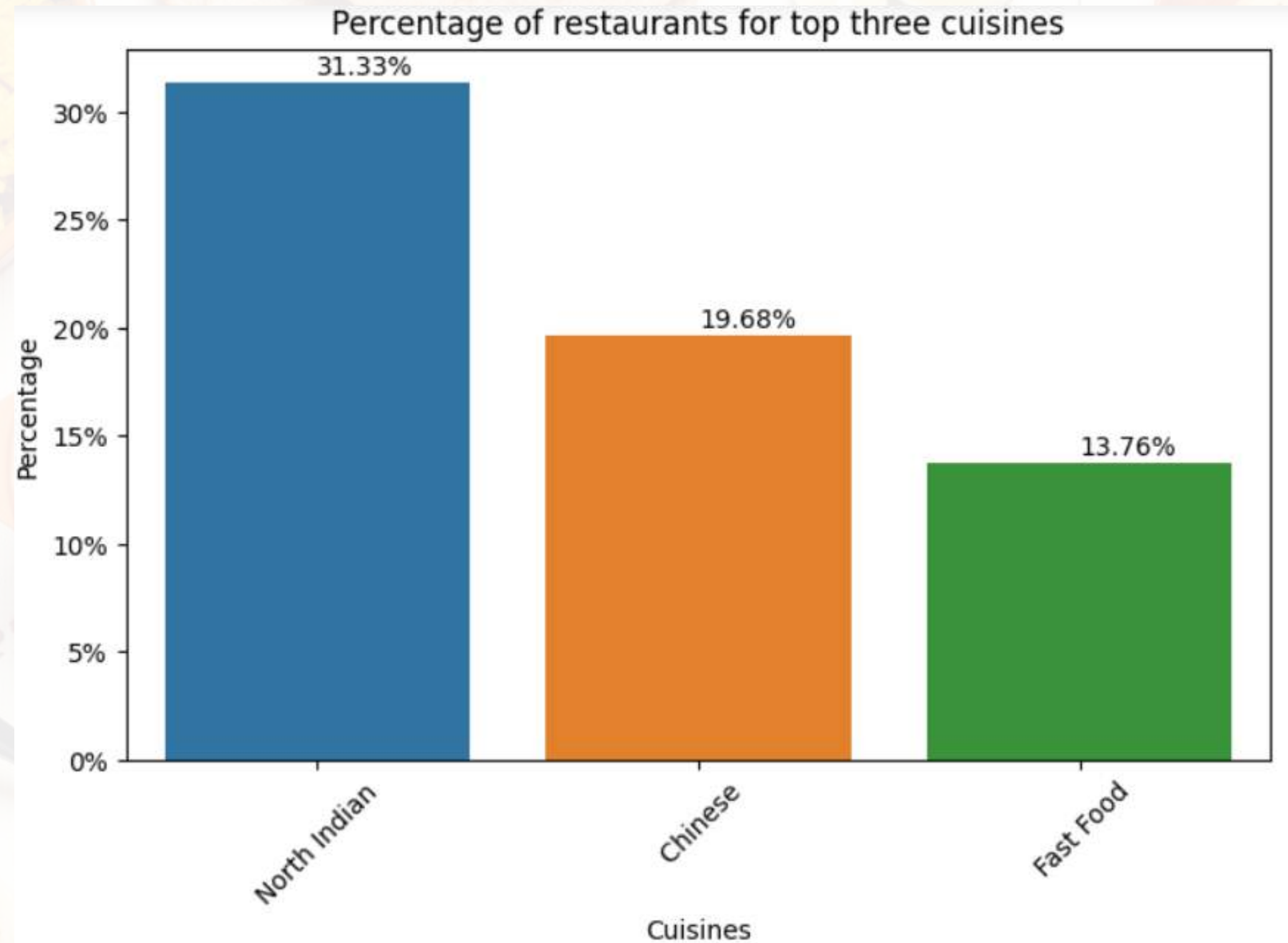
LEVEL-1 TASK-1 Top Cuisines

- Determine the top three most common cuisines?



LEVEL-1 TASK-1 Top Cuisines

- Calculate the percentage of restaurants that serve each of the top cuisines?



LEVEL-1 TASK-2 City Analysis

- Identify the city with the highest number of restaurants?

New Delhi is the city with the highest number of restaurants.

- Calculate the average rating for restaurants in each city?

Inner City	4.9
Quezon City	4.8
Makati City	4.65
Pasig City	4.63
Mandaluyong City	4.62
Beechworth	4.6
London	4.54
Taguig City	4.53
Tagaytay City	4.5
Secunderabad	4.5
Lincoln	4.5
Orlando	4.47
Tampa Bay	4.41
Rest of Hawaii	4.41

LEVEL-1 TASK-2 • Calculate the average rating for restaurants in each city?

Tanunda	4.4	Boise	4.26
Palm Cove	4.4	Kolkata	4.25
Bangalore	4.38	San Juan City	4.25
Dubai	4.37	Wellington City	4.25
Pasay City	4.37	Goa	4.25
Jakarta	4.36	Des Moines	4.24
Hyderabad	4.34	Pune	4.22
Chennai	4.31	Bandung	4.20
Ankara	4.3	Johannesburg	4.20
Tangerang	4.3	Panchkula	4.20
Mohali	4.3	Pensacola	4.20
Randburg	4.3	Athens	4.20
Sandton	4.3	Lucknow	4.20
Clatskanie	4.3	Guwahati	4.19
Vernonia	4.3	Pretoria	4.19
Vineland Station	4.3	Cedar Rapids/Iowa City	4.17
Abu Dhabi	4.3	Ahmedabad	4.16
Istanbul	4.29	Savannah	4.15
Auckland	4.28	Coimbatore	4.13
Rio de Janeiro	4.26	Augusta	4.13
		Jaipur	4.13
		Macon	4.12

LEVEL-1 TASK-2 • Calculate the average rating for restaurants in each city?

Cape Town	4.11	Nagpur	3.96
Dalton	4.11	Agra	3.96
Huskisson	4.1	Bhopal	3.95
East Ballina	4.1	Surat	3.94
Trentham East	4.1	Weirton	3.9
Edinburgh	4.09	Colombo	3.87
Mumbai	4.08	Bogor	3.85
Kochi	4.08	Kanpur	3.82
Doha	4.06	Lakes Entrance	3.8
Chandigarh	4.05	Middleton Beach	3.8
Dehradun	4.05	Santa Rosa	3.8
Manchester	4.04	Hepburn Springs	3.8
Gainesville	4.04	Sioux City	3.76
Columbus	4.03	Mangalore	3.74
Sharjah	4.03	Puducherry	3.73
Vadodara	4.03	Valdosta	3.72
Vizag	4.0	Davenport	3.72
Princeton',	4.0	Chatham-Kent	3.7
Bhubaneshwar	3.98	Phillip Island	3.7
Ludhiana	3.98	Forrest	3.7
Indore	3.97	Fernley	3.7

LEVEL-1 TASK-2 • Calculate the average rating for restaurants in each city?

Inverloch	3.7	Pocatello	3.49
Mysore	3.7	Ranchi	3.45
Amritsar	3.69	Patna	3.45
Birmingham	3.68	Penola	3.4
Waterloo	3.65	Miller	3.4
Dicky Beach	3.6	Allahabad	3.4
Ojo Caliente	3.6	Aurangabad	3.38
Lakeview	3.6	Potrero	3.3
Lorn	3.6	Yorkton	3.3
Monroe	3.6	Balingup	3.2
Victor Harbor	3.6	Winchester Bay	3.2
Singapore	3.58	Cochrane	3.1
Albany	3.56	Consort	3.0
Dubuque	3.54	Mayfield	2.9
são paulo	3.53	Ghaziabad	2.85
Nashik	3.52	Gurgaon	2.65
Varanasi	3.51	Paynesville	2.6
Macedon	3.5	New Delhi	2.44
Flaxton	3.5	Montville	2.4
Armidale	3.5	Mc Millan	2.4
Brasalia	3.5	Noida	2.04
		Faridabad	1.87

LEVEL-1 TASK-2 Top Cuisines

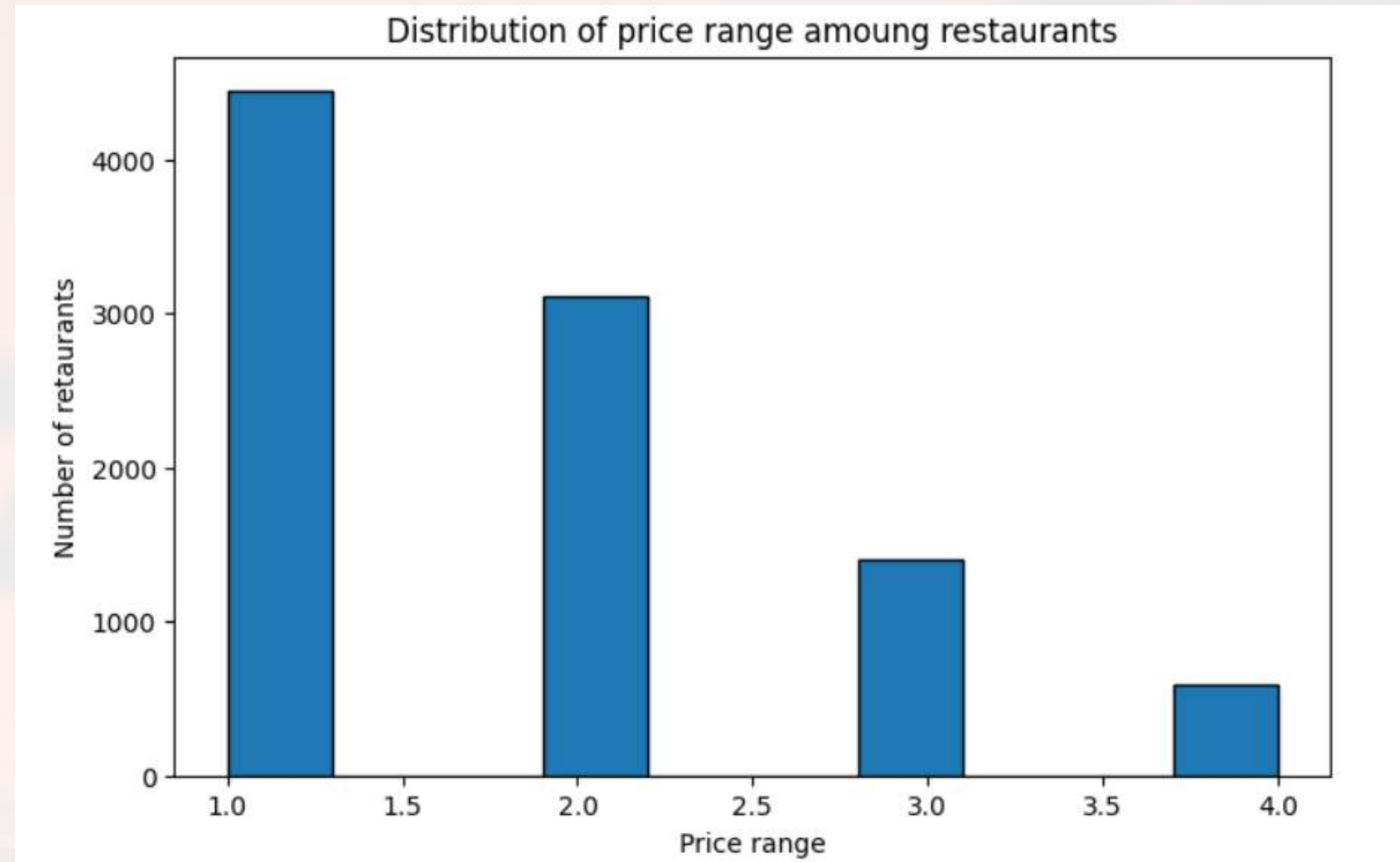
- Determine the city with the highest average rating?

Inner City is the city with the highest average rating.



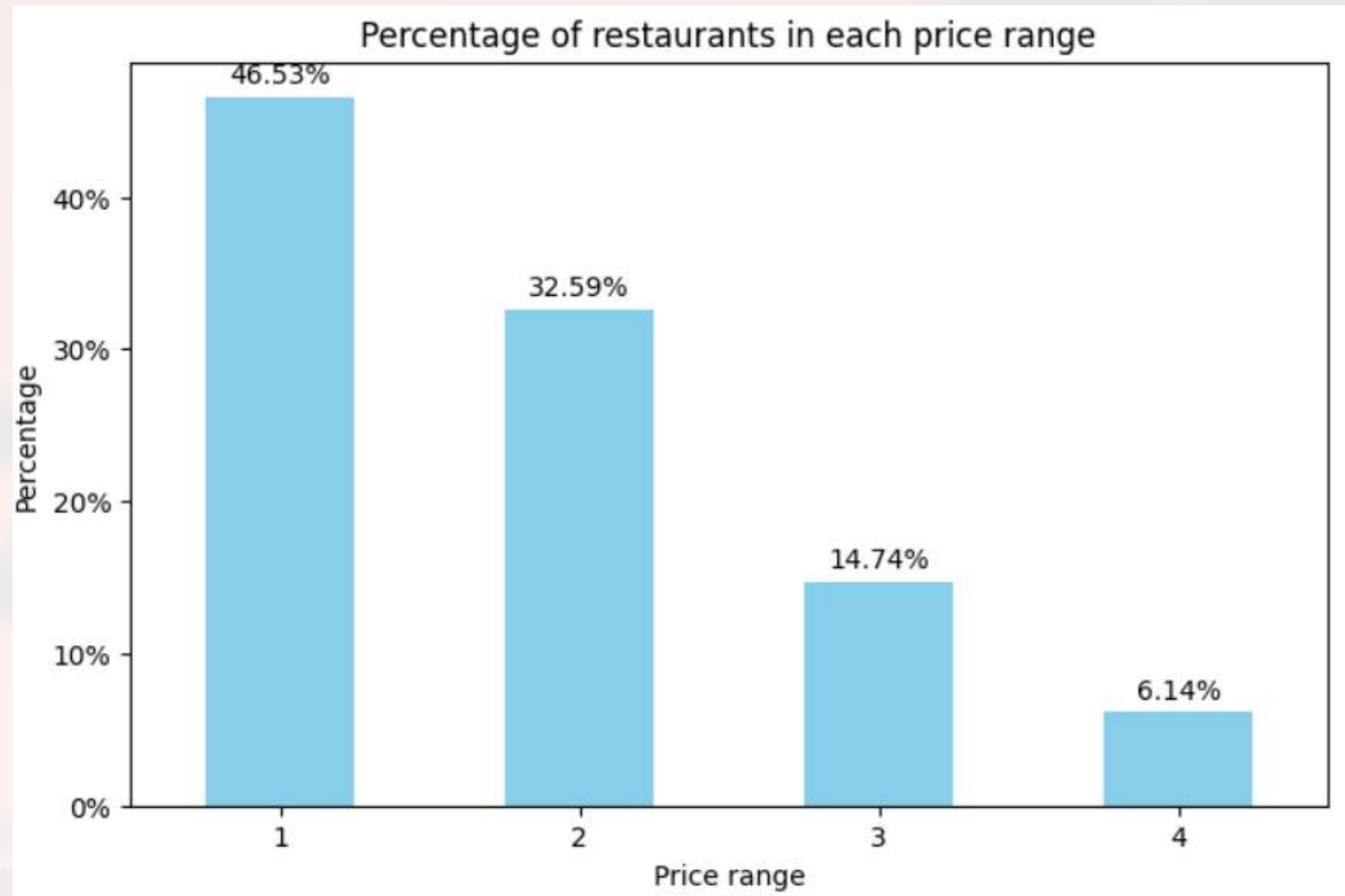
LEVEL-1 TASK-3 Price Range Distribution

- Create a histogram or bar chart to visualize the distribution of price ranges among the restaurants?



LEVEL-1 TASK-3 Price Range Distribution

- Calculate the percentage of restaurants in each price range category?



LEVEL-1 TASK-4 Online Delivery

- Determine the percentage of restaurants that offer online delivery?

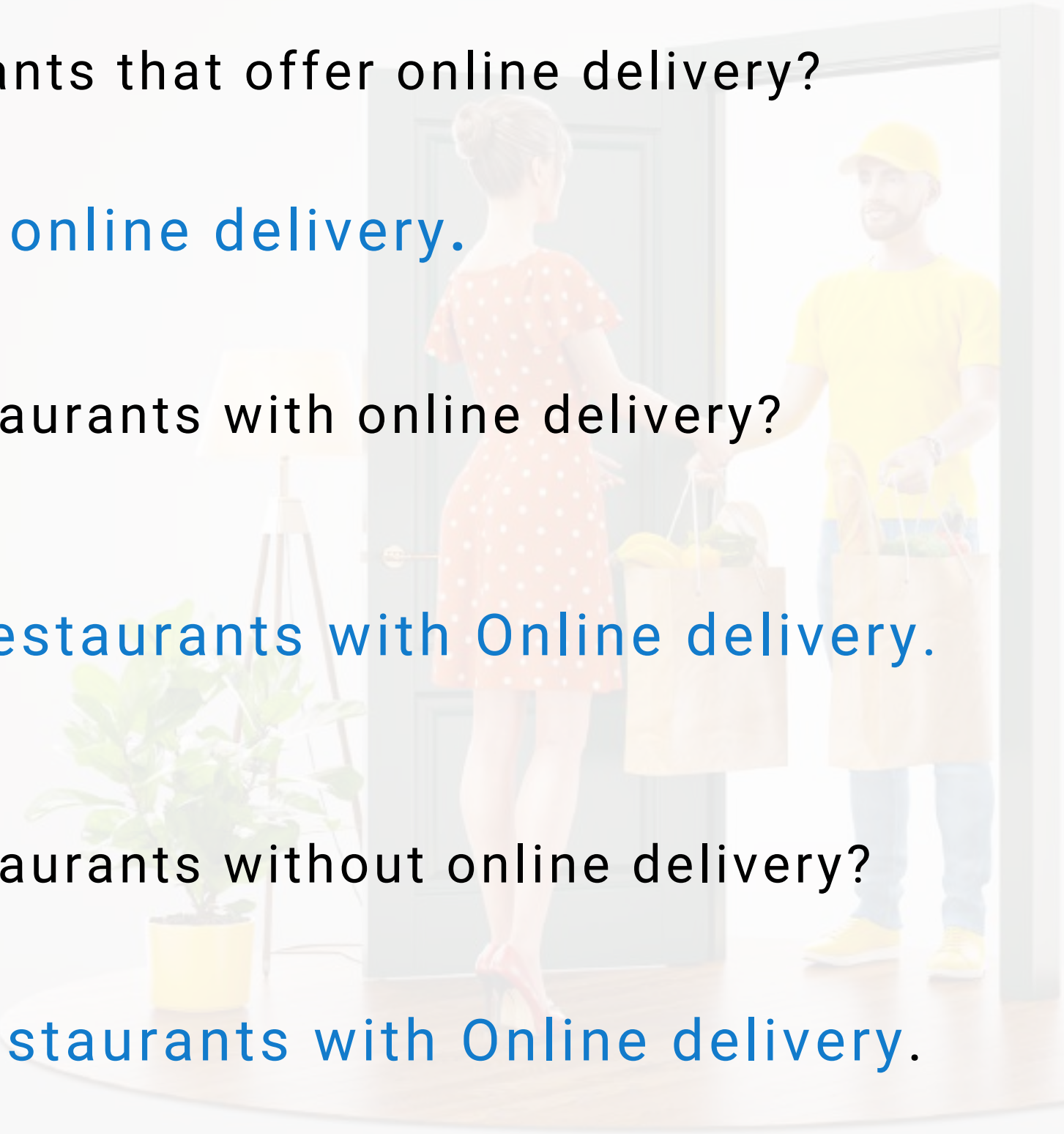
25.66% of restaurants that offer online delivery.

- Compare the average ratings of restaurants with online delivery?

3.25 is the average ratings of restaurants with Online delivery.

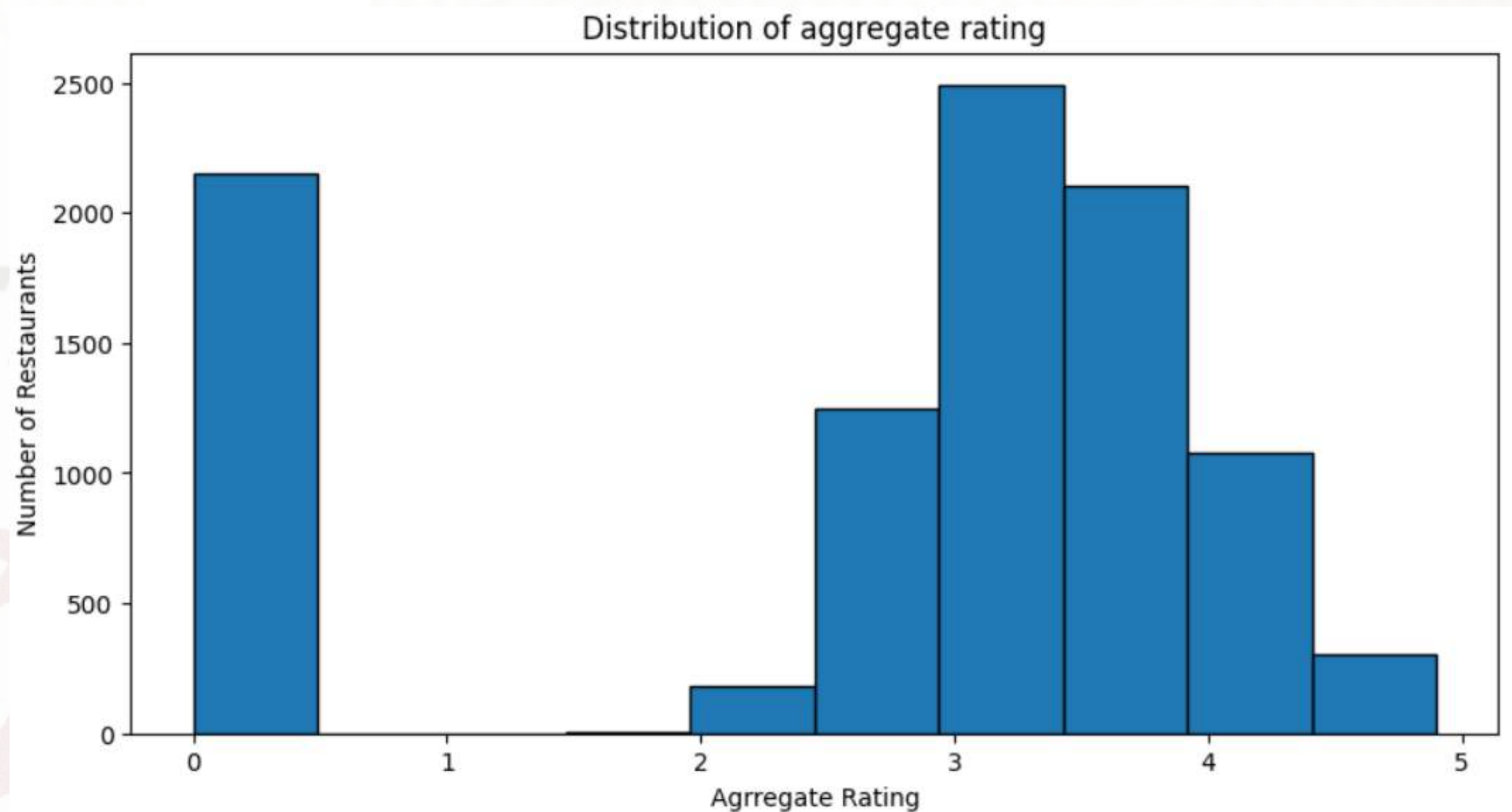
- Compare the average ratings of restaurants without online delivery?

2.47 is the average ratings of restaurants with Online delivery.



LEVEL-2 TASK-1 Restaurant Ratings

- Analyze the distribution of aggregate ratings?



LEVEL-2 TASK-1 Restaurant Ratings

- Determine the most common rating range?

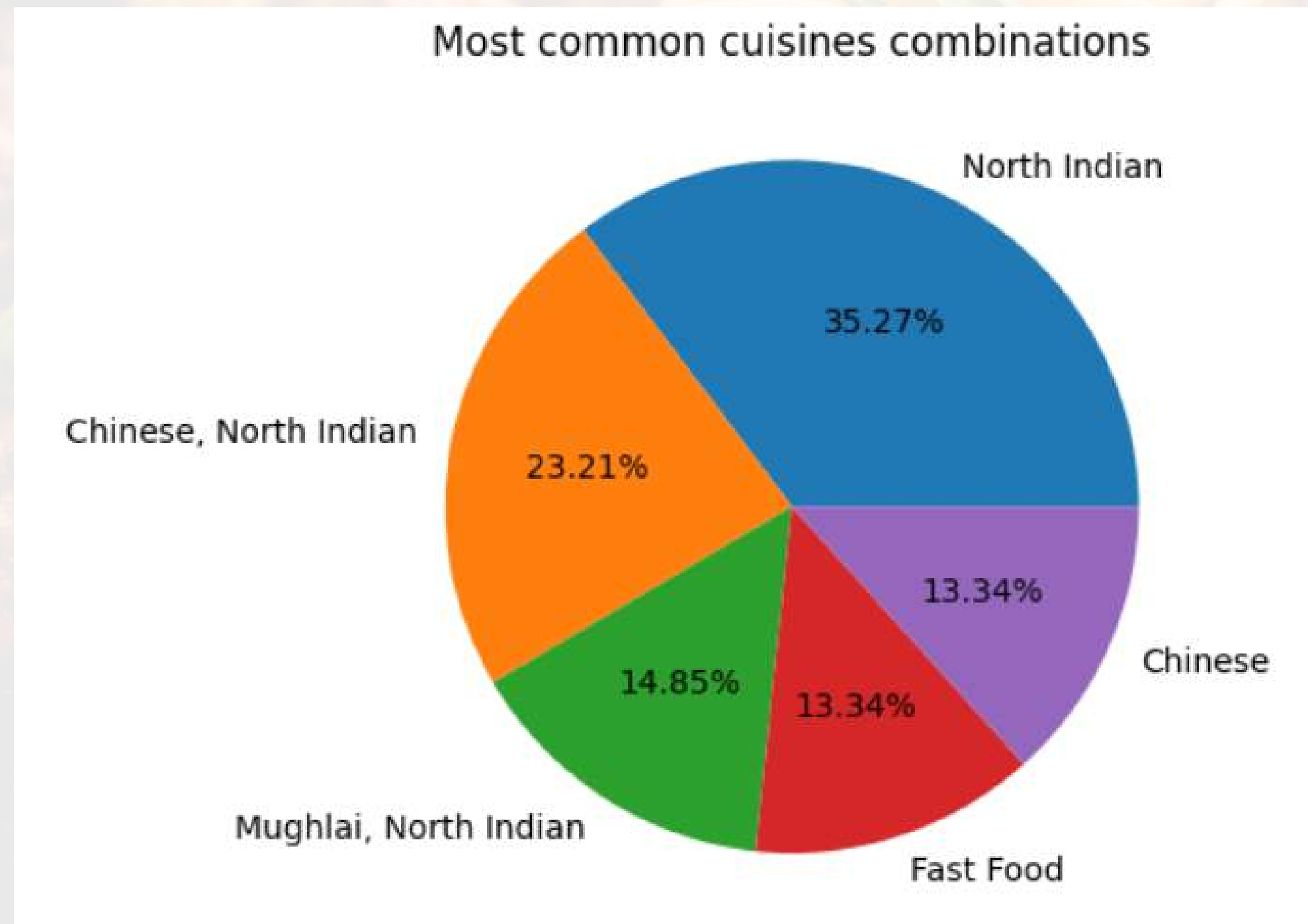
3.5 is the most common rating range.

- Calculate the average number of votes received by restaurants?

156.91 is the average number of votes received by restaurants.

LEVEL-2 TASK-2 Cuisine Combination

- Identify the most common combinations of cuisines?



LEVEL-2 TASK-2 Cuisine Combination

- Determine if certain cuisine combinations tend to have higher ratings?

World Cuisine

Vietnamese

Turkish Pizza

Afghani, Chinese, Indian, Pakistani

Afghani, Curry, Indian, Pakistani

American, Asian, Burger

American, Asian, Continental, Italian, North Indian

American, Asian, Continental, North Indian

American, Asian, European, Italian, Lebanese, Mexican, North Indian

Bakery, Cafe, Continental, Desserts

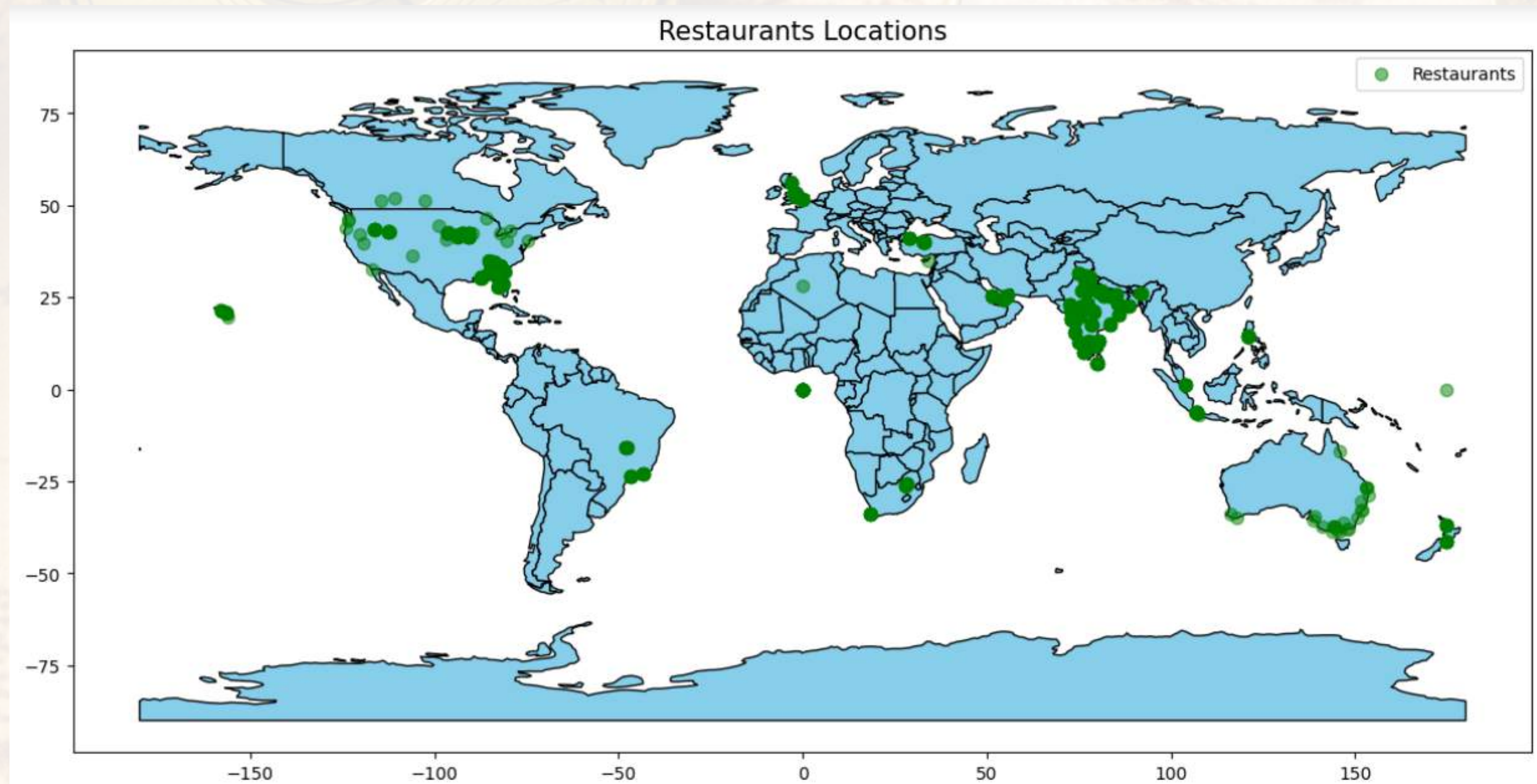
Bakery, Cafe, Continental, Italian

Burger, Sandwich, Seafood

Biryani, Indian, Mughlai, South IndianETC

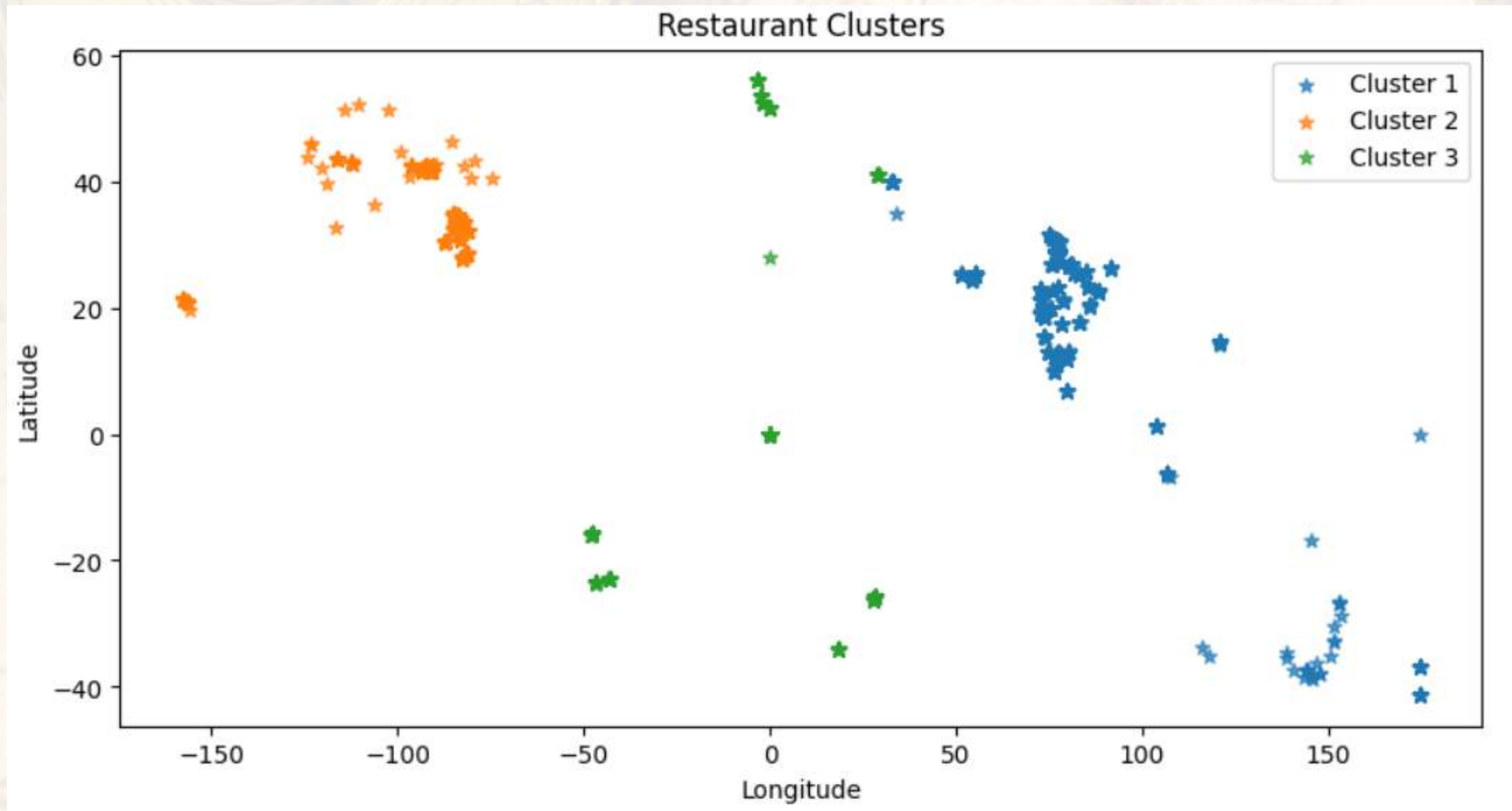
LEVEL-2 TASK-3 Geographic Analysis

- Plot the locations of restaurants on a map using longitude and latitude coordinates?



LEVEL-2 TASK-3 Geographic Analysis

- Identify any patterns or clusters of restaurants in specific areas?



LEVEL-2 TASK-4 Restaurant Chains

- Identify if there are any restaurant chains present in the dataset?

Cafe Coffee Day

Domino's Pizza

Subway

Green Chick Chop

McDonald's

Keventers

Pizza Hut

Giani

Baskin Robbins

'Barbeque Nation

Giani's

Barista

Dunkin' Donuts

Costa Coffee

Pind Balluchi

Wah Ji Wah

Twenty Four Seven

Pizza Hut Delivery

Sagar Ratna

Republic of Chicken

KFC

Starbucks

Chaayos

Burger King

Haldiram

Shree Rathnam

Frontier

'Moti Mahal Delux

Bikanervala

Aggarwal Sweets

Behrouz Biryani

Karim's

Bikaner Sweets

Chicago Pizza

Apni Rasoi

Chowringhee Lane

Wow! Momo

Madras Cafe

Burger Point

Gopala

Shama Chicken Corner

Berco's

Nirula's Ice Cream

Sardar A Pure Meat Shop

Yo! China

Cocoberry

Punjabi Tadka

Angels in my Kitchen

Faasos

Ovenstory Pizza

Chowringhee

Punjabi Chaap Corner

Kebab Xpress

'Nazeer Foods

LEVEL-2 **TASK-4** Restaurant Chains

- Identify if there are any restaurant chains present in the dataset?

Foodies

Doughlicious

Zizo

Onesta

Chimney

Aggarwal Bikaner Sweets

Zaffran

Foodhall

Just Vada Pav

Roll Club

Amici Cafe

Chinese Food Corner

Kerala Cafe

Wok On Fire

Bats On Delivery

Amul Ice-Cream Parlour

Cafe Delhi Heights

Bharat Sweets

Chawla's Chic Inn

Tikka Town

Talaga Sampireun

Bikkane Biryani

Shawarma Wala

True Blue

Punjabi Dhaba

Food Plaza

Chinese Food

SodaBottleOpenerWala

Breaktym

'Defence Bakery

Muradabadi Shahi Biryani & Chicken Corner

Tikka Junction

Aggarwal Sweets India

Not Just Paranthas

Krispy Kreme

HuHot Mongolian Grill

Hard Rock Cafe

Goosebumps

Street Foods by Punjab Grill

Habibi Express

Joost Juice Bar

Desi Vibes

La Pino'z Pizza

The Chai Story

Wah G Wah

Hira Sweets

Hasty Tasty

Shahenshah

Midnight Hunger Hub

Riyaz Biryani Corner

Polka Pastry & Snack Bar

Changezi Chicken

Aggarwal Sweet Centre

Urban Punjab

Side Wok

'Havmor Ice Cream

The Fisherman's WharETC

LEVEL-2 TASK-4 Restaurant Chains

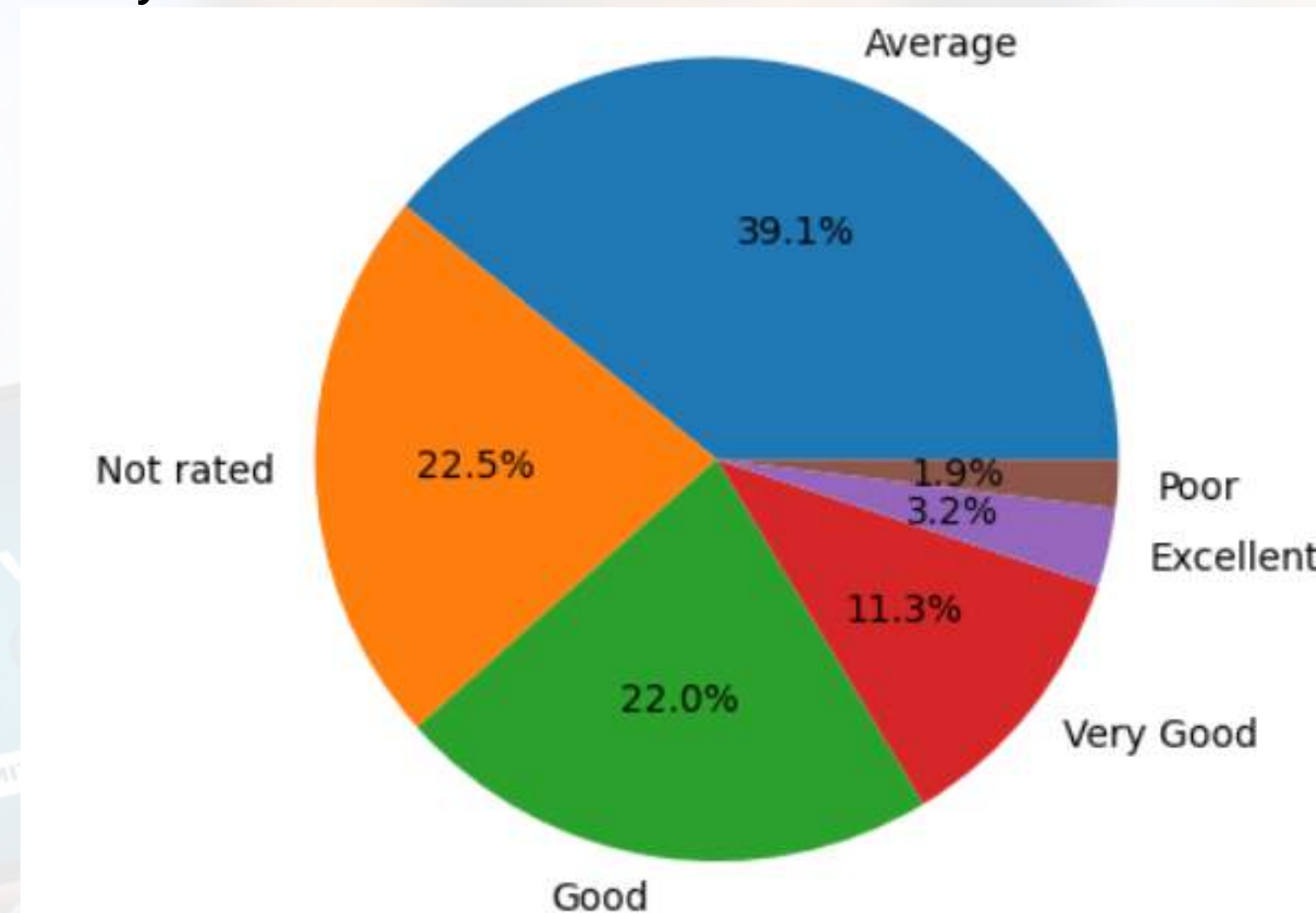
- Analyze the ratings and popularity of different restaurant chains?

	Average rating	Total votes
Restaurant Name		
Talaga Sampireun	4.900	5514
Silantro Fil-Mex	4.850	1364
AB's Absolute Barbecues	4.850	3151
AB's - Absolute Barbecues	4.825	13400
Naturals Ice Cream	4.800	3094
...
Big Biryani	0.000	1
Flavours Kitchen	0.000	3
Anand Sweets	0.000	3
Radha Swami Shudh Vaishno Dhaba	0.000	6
OCD - Online Cake Delivery	0.000	2

734 rows × 2 columns

LEVEL-3 TASK-1 Restaurant Reviews

- Analyze the text reviews to identify the most common positive and negative keywords?

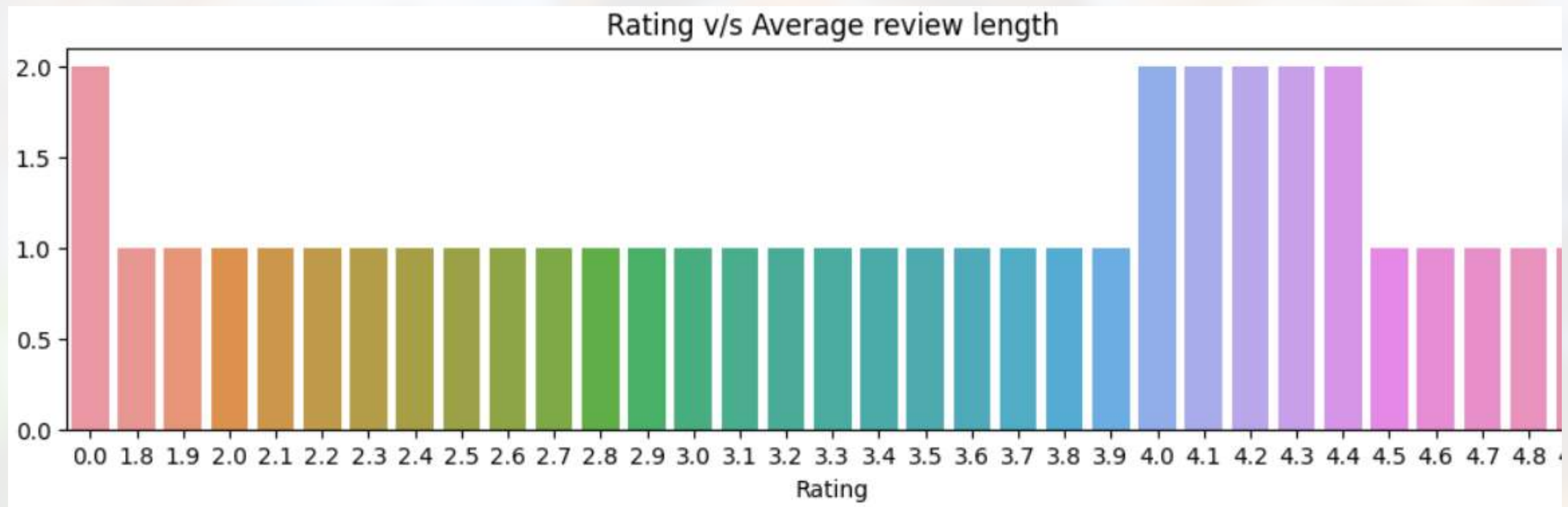


- The most common positive keyword counts : **301** (i.e, for **Excellent**)
- The most common negative keyword counts : **186** (i.e, for **Poor**)

LEVEL-3 TASK-1 Restaurant Reviews

- Calculate the average length of reviews and explore if there is a relationship between review length and rating?

1.34 is the average length of reviews.



LEVEL-3 TASK-2 Votes Analysis

- Identify the restaurants with the highest and lowest number of votes?

Restaurant with highest vote: **Toit 10934**

Restaurant with lowest vote: **Cantinho da Gula 0**

- Analyze if there is a correlation between the number of votes and the rating of restaurants?

Correlation between Votes and Rating: **0.31**

LEVEL-3 TASK-3 Price Range vs. Online Delivery and Table Booking

- Analyze if there is a relationship between the price range and the availability of online delivery and table booking?

Price Range vs Online Delivery:

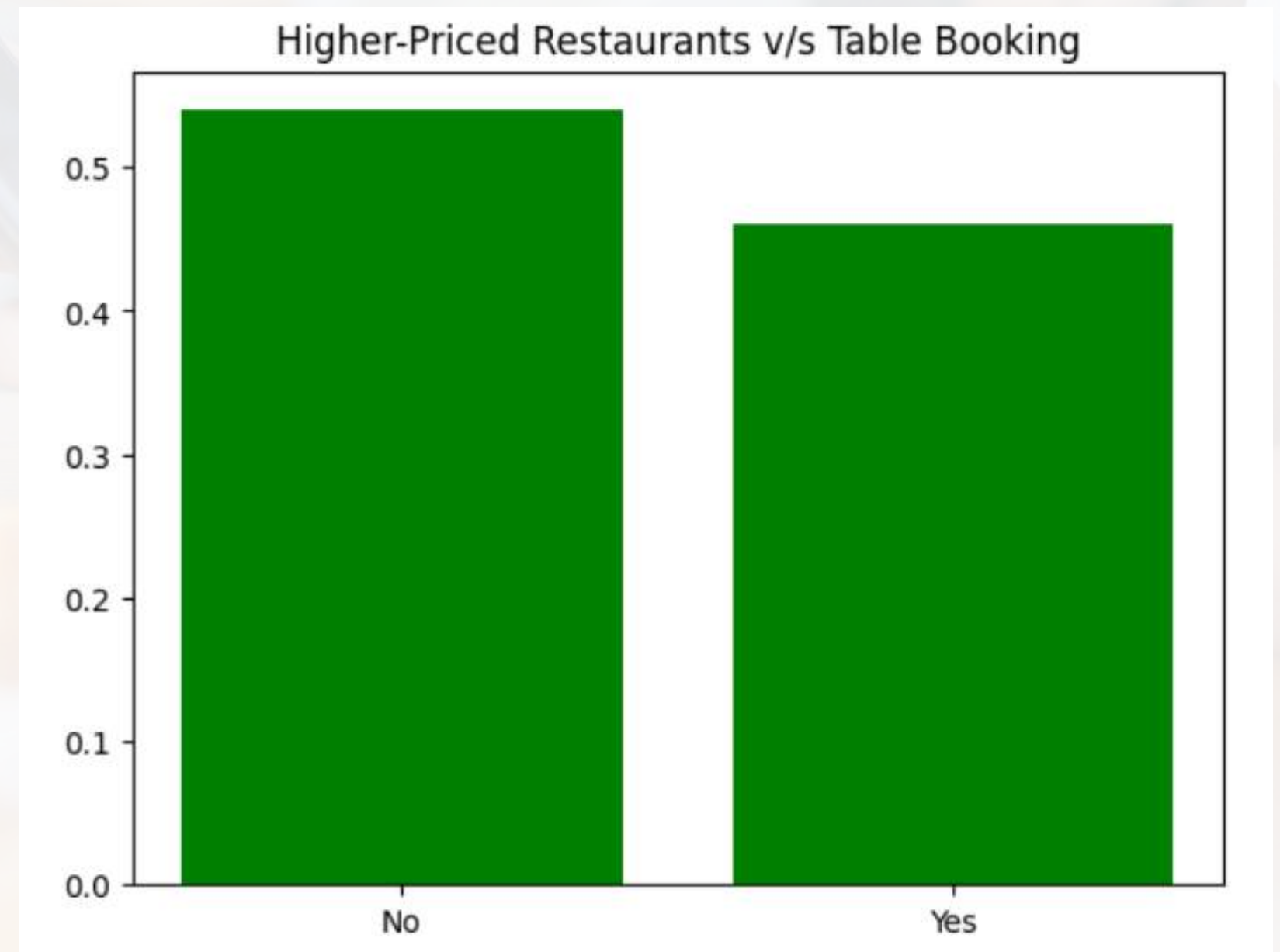
Has Online delivery	No	Yes
Price range		
1	0.842259	0.157741
2	0.586894	0.413106
3	0.708097	0.291903
4	0.909556	0.090444

Price Range vs Table Booking:

Has Table booking	No	Yes
Price range		
1	0.999775	0.000225
2	0.923225	0.076775
3	0.542614	0.457386
4	0.532423	0.467577

LEVEL-3 TASK-3 Price Range vs. Online Delivery and Table Booking

- Determine if higher-priced restaurants are more likely to offer these services?



Technologies used:



Thank You



I extend my sincere gratitude to Cognifyz Technologies for the internship opportunity. The experience gained in restaurant data analysis will significantly contribute to informed decision-making. Thank you for the invaluable learning experience.