



Exploratory Analysis Of Zomato's Restaurant Dataset

Team Mates

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Agenda

**Scrape data from food delivery
platform Zomato using python library
and analyze the data**

Tools & Tech Used

Scraping Libraries:

Jupyter Notebook
Selenium
BeautifulSoup
Pandas
Time

Data Cleaning & Visualization Tools:

MySQL WorkBench
Ms Excel



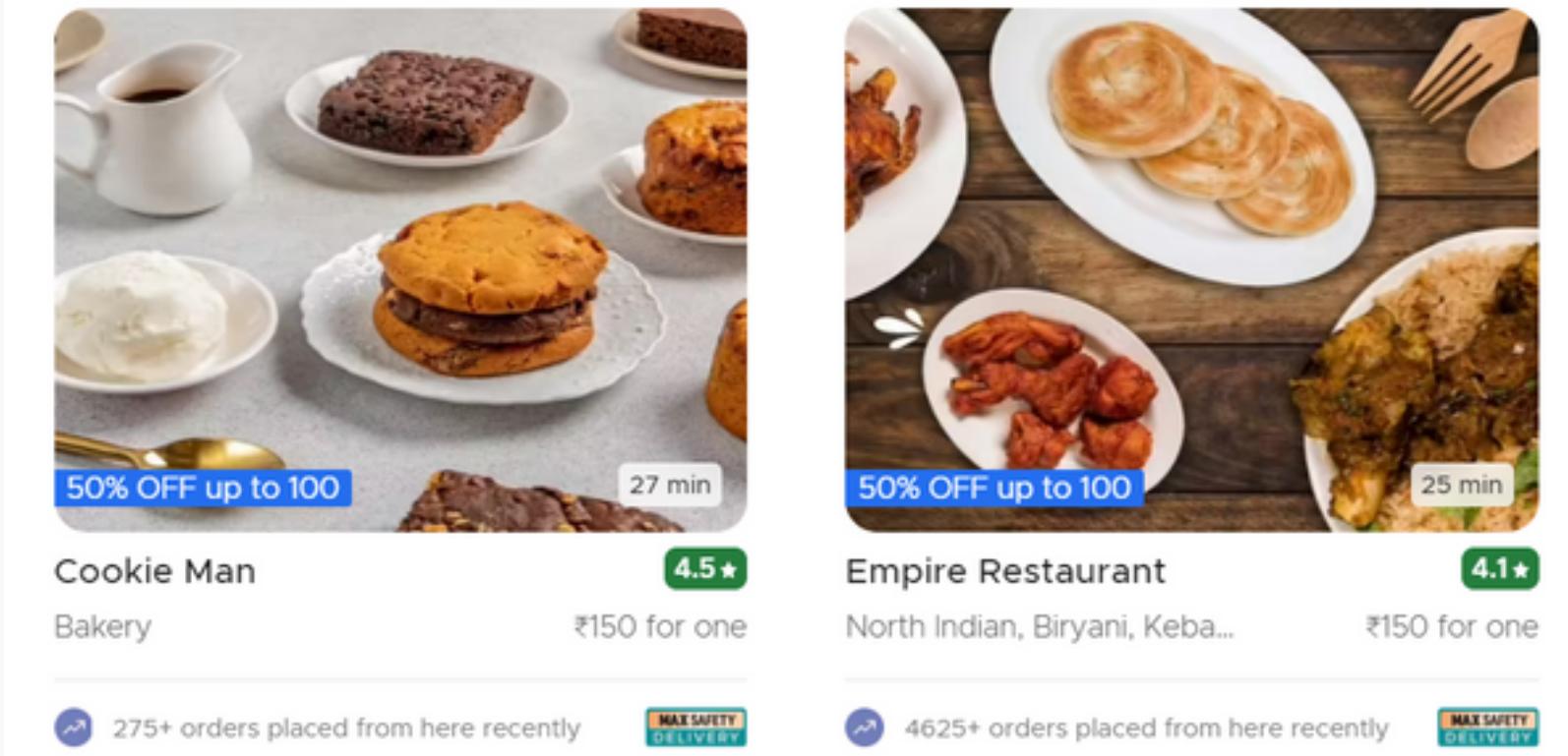
Outlook :

Data scrapping using Selenium And
Soup to extract following Info of
Restaurants from zomato

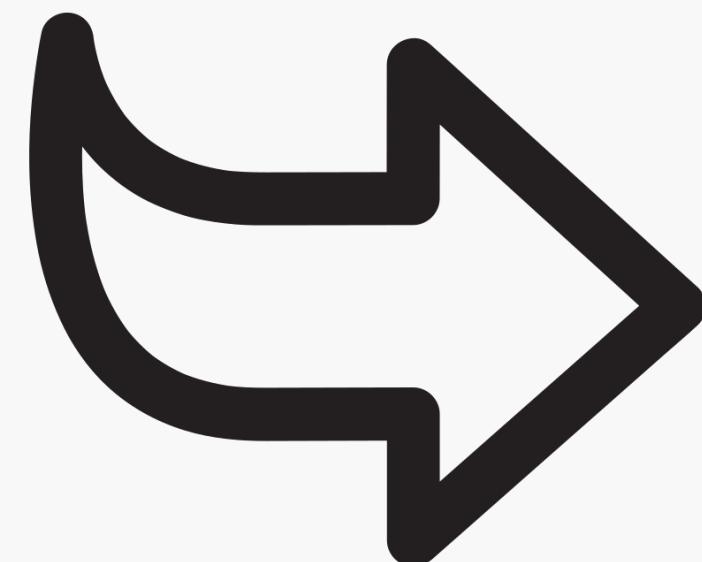
- Name
- Address
- Cuisines
- Cuisine Price
- Categories
- Dishes
- Ratings
- Reviews



Scraping Data & Converting To Csv



Using Selenium And Soup we Extracted data present on page and stored it in series and merging them to get the dataframe below



0	https://www.zomato.com/bangalore/pathaan-sir-f...	Pathaan Sir	3.8
1	https://www.zomato.com/bangalore/hotel-revoli-...	Hotel Revoli Inn	3.9
2	https://www.zomato.com/bangalore/c-k-mega-hot-...	C. K. Mega Hot Food	4.0
3	https://www.zomato.com/bangalore/lemon-leaf-in...	Lemon Leaf	3.9
4	https://www.zomato.com/bangalore/empire-restau...	Empire Restaurant	4.1
...
676	https://www.zomato.com/bangalore/hotel-chandri-...	Hotel Chandrika	4.2
677	https://www.zomato.com/bangalore/bhagathram-sw...	Bhagathram Sweets	3.7
678	https://www.zomato.com/bangalore/basaveshwari-k...	Basaveshwari Khanavali	4.0
679	https://www.zomato.com/bangalore/bangarapet-bh...	Bangarapet Bhel House	4.1
680	https://www.zomato.com/bangalore/udipi-upahar-...	Udupi Upahar Veg Restuarant	3.9

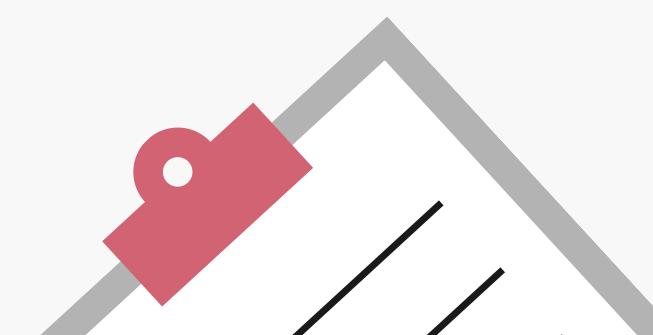
After Cleaning DataSet Converting them into two table



Links	Address	latitude	longitude	category	Dishes
https://www.zomato.com/bangalore/Shivajinagar, Bangalore	12.98573	77.60525	Recomm	'Butter Ch	
https://www.zomato.com/bangalore/Residency Road, Bangalore	12.9731	77.60924	Todays E	'Meghana	
https://www.zomato.com/bangalore/Brigade Road, Bangalore	12.9733	77.60751	Todays E	'Chicken C	
https://www.zomato.com/bangalore/Shanti Nagar, Bangalore	12.96233	77.5991	Recomm	'Margheri	
https://www.zomato.com/bangalore/Commercial Street, Bangalore	12.98272	77.60661	Recomm	'Chicken V	
https://www.zomato.com/bangalore/Indiranagar, Bangalore	12.96213	77.64195	Todays E	'Supreme	
https://www.zomato.com/bangalore/Shanti Nagar, Bangalore	12.95441	77.59307	Recomm	'Pista Ghe	
https://www.zomato.com/bangalore/Malleshwara, Bangalore	12.99436	77.57158	Recomm	'Ghee Rice	
https://www.zomato.com/bangalore/Shivajinagar, Bangalore	12.98507	77.60691	Recomm	'Chicken S	
https://www.zomato.com/bangalore/Basavanagudi, Bangalore	12.94951	77.57463	Recomm	'Death By	
https://www.zomato.com/bangalore/Basavanagudi, Bangalore	12.94006	77.57995	Recomm	'Paneer R	
https://www.zomato.com/bangalore/Mantri Square, Bangalore	12.99159	77.57058	Pizza Veg	'Onion an	
https://www.zomato.com/bangalore/Brigade Road, Bangalore	12.97047	77.60668	Recomm	'Kaju Phoc	
https://www.zomato.com/bangalore/Ulsoor, Bangalore	12.97736	77.61929	Recomm	"D'lite Chi	
https://www.zomato.com/bangalore/Jayanagar, Bangalore	12.93244	77.58368	Recomm	'Donne Ch	
https://www.zomato.com/bangalore/Shanti Nagar, Bangalore	12.96117	77.60924	Recomm	'Chicken S	

Links	Address	latitude	longitude	category
https://www.zomato.com/bangalore/Shivajinagar, Bangalore	12.9857280210	77.6052543148	Recomm	
https://www.zomato.com/bangalore/Residency Road, Bangalore	12.9731013292	77.6092397422	Todays E	
https://www.zomato.com/bangalore/Brigade Road, Bangalore	12.9732996801	77.6075088281	Todays E	
https://www.zomato.com/bangalore/Shanti Nagar, Bangalore	12.9623252697	77.5991009921	Recomm	
https://www.zomato.com/bangalore/Commercial Street, Bangalore	12.9827171190	77.6066054776	Recomm	
https://www.zomato.com/bangalore/Indiranagar, Bangalore	12.9621305371	77.6419469342	Todays E	

links	Name	tags	price for One	cuisine
https://www.zomato.com/Royal Restaurant			4 150 for one	North Indian
https://www.zomato.com/Meghana Foods			4.4 150 for one	Biryani
https://www.zomato.com/KFC			3.7 150 for one	Burger
https://www.zomato.com/Pizza Hut			3.8 150 for one	Pizza
https://www.zomato.com/Burger King			3.9 150 for one	Burger
https://www.zomato.com/Nandhana Palace			4 150 for one	Biryani
https://www.zomato.com/A2B - Adyar Ananda Bh			4.2 150 for one	South Indian
https://www.zomato.com/Al-Bek			4.1 150 for one	Mughlai
https://www.zomato.com/Imperio Restaurant			3.6 150 for one	North Indian
https://www.zomato.com/Thalassery Restaurant			4 150 for one	Kerala
https://www.zomato.com/Five Star Chicken			3.5 150 for one	Fast Food

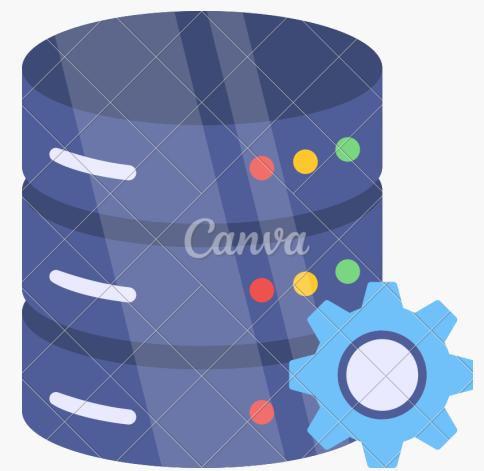


Joining two tables to form a main table

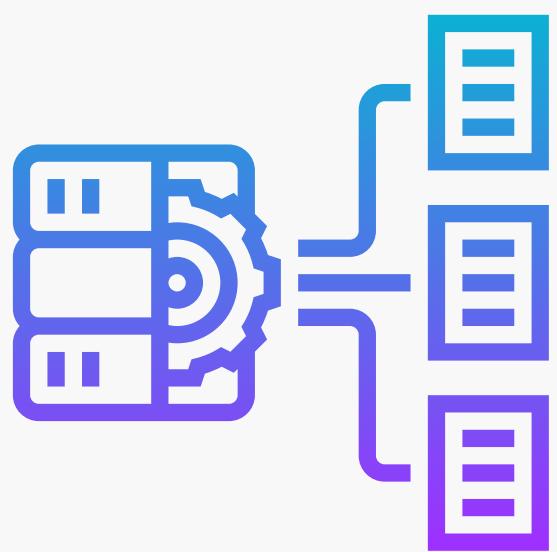
Address	latitude	longitude	category	Dishes
Shivajinagar, Bangalore	12.98572802	77.60525431	Recommended (39), Combos (19), Starters (29)	Butter Chicken
c Residency Road, Bangalore	12.97310133	77.60923974	Todays Exclusive Dishes (3), Recommended (35), Veg Starter (9)	Meghana Chicken 555
> Brigade Road, Bangalore	12.97329988	77.60750883	Todays Exclusive Dishes (3), Recommended (13), Weekend Deals (4)	Chicken Chizza
r Shanti Nagar, Bangalore	12.96232527	77.59910099	Recommended (34), NEW Cheesy Momo Mial (5), One Plus One Medium @649 (2)	Margherita Pizza
c Commercial Street, Bangalore	12.98271712	77.60660548	Recommended (36), Rs 129 Deal Of The Day (23), Deal Of The Day @169 (15)	Chicken Whopper.
I Indiranagar, Bangalore	12.96213054	77.64194693	Todays Exclusive Dishes (1), Recommended (34), Acclaimed Biryani's (2)	Supreme Boneless Chicken Biryani
v Shanti Nagar, Bangalore	12.9544136	77.5930683	Recommended (1), Bakery (1)	Pista Ghee Biscuits 250 Gms- Coo
1 Malleshwaram, Bangalore	12.99435705	77.57158186	Recommended (32), Dessert (2), Platters (5)	Ghee Rice Combo

Unique_Id	Links	Name	Ratings	Price_for_one	Cuisine 1	Cuisine 2
1	https://www.zomato.com/bangalore/pizza-hut-shar	Pizza Hut	3.8	200	Pizza	Fast Food
3	https://www.zomato.com/bangalore/kfc-brigade-ro	KFC	3.7	200	Burger	Fast Food
4	https://www.zomato.com/bangalore/burger-king-ct	Burger King	3.9	200	Burger	Fast Food
5	https://www.zomato.com/bangalore/meghana-foo	Meghana Foods	4.4	200	Biryani	Andhra
6	https://www.zomato.com/bangalore/kanti-sweets-l	Kanti Sweets	4.4	200	Mithai	Street Food
7	https://www.zomato.com/bangalore/five-star-chick	Five Star Chicken	3.5	200	Fast Food	Rolls
8	https://www.zomato.com/bangalore/onesta-maled	Onesta	3.7	200	Pizza	Pasta

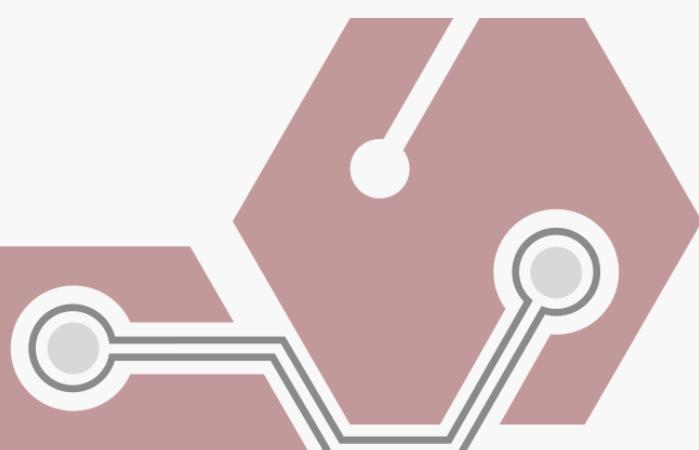
cuisine_4	cuisine_5	cuisine_6	cuisine_7	cuisine_8	l=Links	Address	latitude	longitude
Beverages					https://www.zomato.com/bangalore/pizza-hut-...	Shanti Nagar, Bangalore	12.96232527	77.59910
Desserts	Beverages				https://www.zomato.com/bangalore/kfc-brigad...	Brigade Road, Bangalore	12.97329988	77.60750
Beverages					https://www.zomato.com/bangalore/burger-kin...	Commercial Street, Bangalore	12.98271712	77.60660
Seafood					https://www.zomato.com/bangalore/meghana-...	Residency Road, Bangalore	12.97310133	77.60932
					https://www.zomato.com/bangalore/kanti-swe...	Brigade Road, Bangalore	12.97046862	77.60667
					https://www.zomato.com/bangalore/five-star-c...	Shivajinagar, Bangalore	12.98507028	77.60690
					https://www.zomato.com/bangalore/onesta-ma...	Mantri Square, Malleshwaram, Bangalore	12.9915865	77.57058
Chinese	Fast Food	Beverages	Desserts		https://www.zomato.com/bangalore/a2b-adyar...	Shanti Nagar, Bangalore	12.9544136	77.59306
Chinese	Seafood				https://www.zomato.com/bangalore/al-bek-mall...	Malleshwaram, Bangalore	12.99435705	77.57158
					https://www.zomato.com/bangalore/hari-super...	Brigade Road, Bangalore	12.97059853	77.60662
					https://www.zomato.com/bangalore/polar-bear...	Basavangudi, Bangalore	12.94951278	77.57463
Chinese	Mughlai	South Ind...	Desserts	Bever...	https://www.zomato.com/bangalore/handhana...	Indiranagar, Bangalore	12.96213054	77.64194
					https://www.zomato.com/bangalore/corner-ho...	Residency Road, Bangalore	12.97367472	77.60932
					https://www.zomato.com/bangalore/chickin-1...	Rajajinagar, Bangalore	12.9809325	77.56296
					https://www.zomato.com/bangalore/cakezone-...	Koramangala 6th Block, Bangalore	12.940404	77.62517



Creating Pivot tables in Excel to analyse the data.

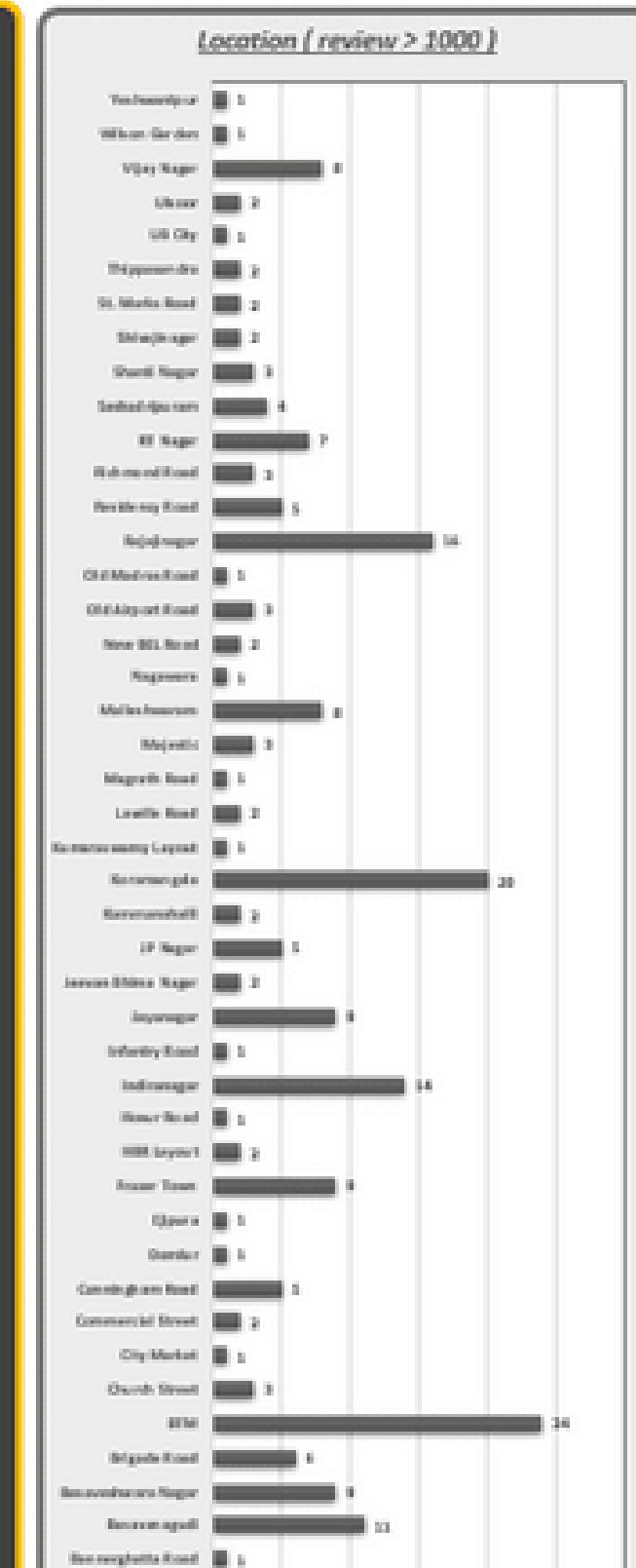
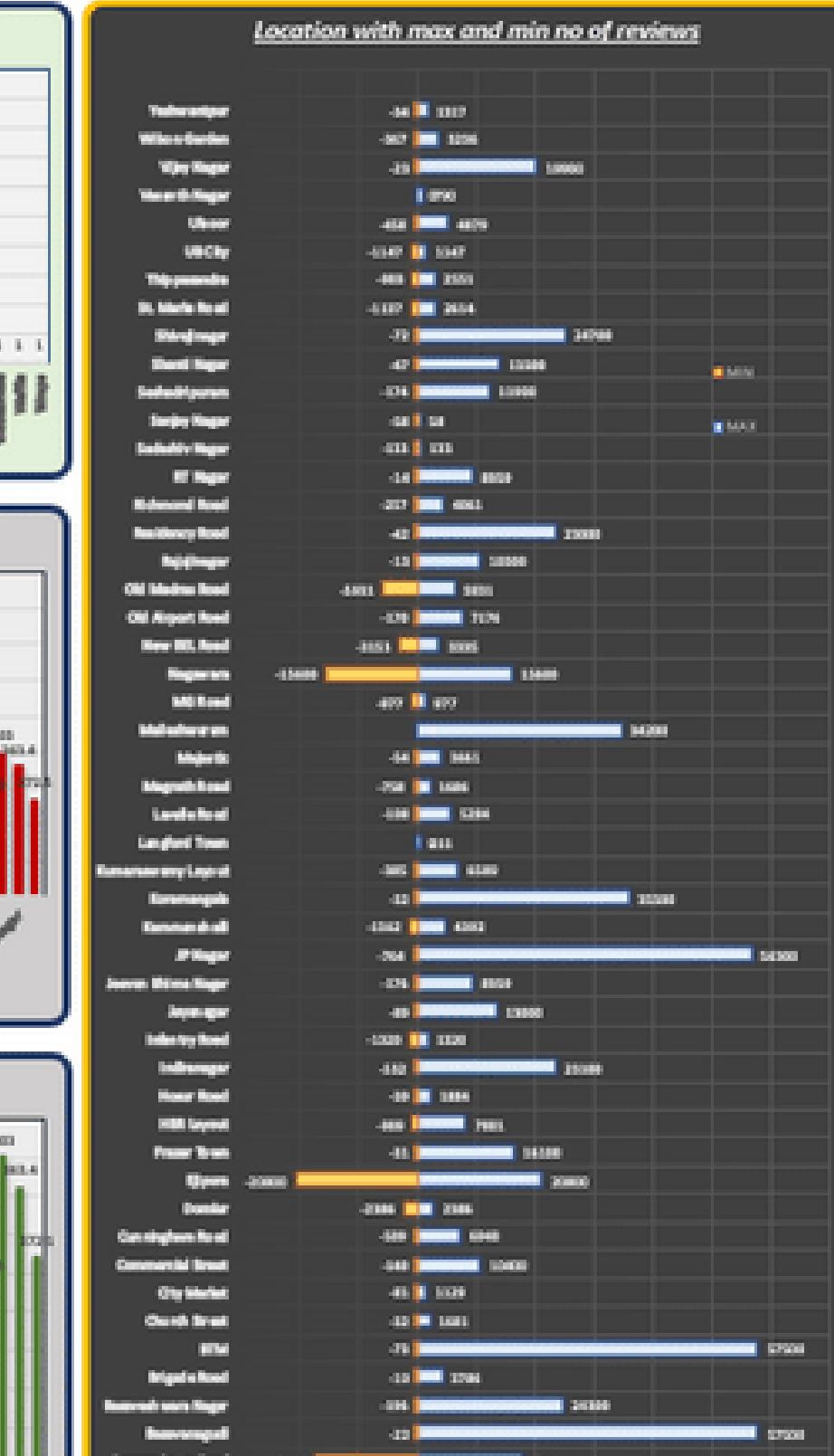
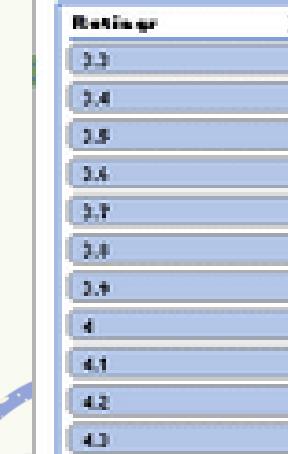
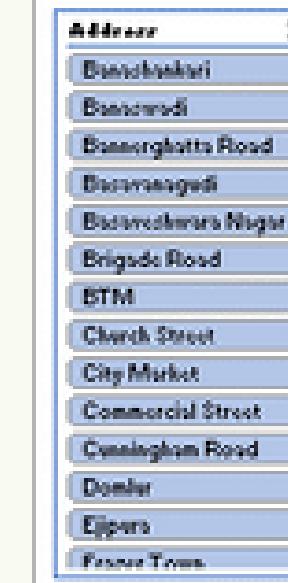
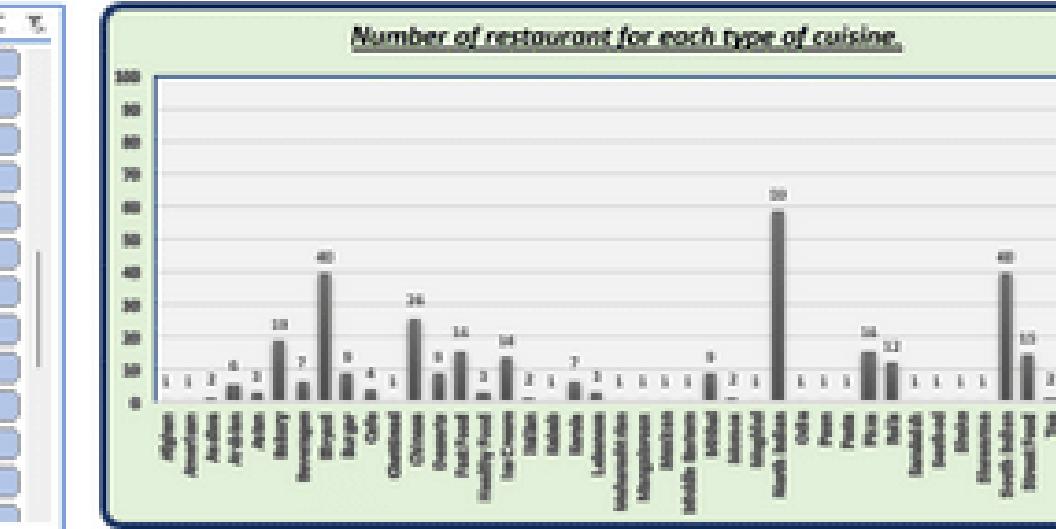


Row Labels	Count of Name	Row Labels	Max of Reviews	Min of Reviews2
1 Sobha	1	1 Sobha	1455	1455
Banashankari	4	Banashankari	14500	45
Banaswadi	2	Banaswadi	16500	99
Bannerghatta Road	1	Bannerghatta Road	17100	17100
Basavanagudi	14	Basavanagudi	57500	22
Basaveshwara Nagar	11			
Brigade Road	14			
BTM	33			



Analysis Dashboard

DELIVERY DASHBOARD



Insights Generated

As per the Area-wise distribution of restaurants, BTM has the highest and Sadashiv Nagar has the least no of restaurants.

1 Sobha has the highest avg price around ₹ 400 while City market has the lowest avg price around ₹ 30 .

"Pure Veg Meals By LunchBox" in Shanti Nagar is the most expensive restaurant with avg price around ₹ 800 - 900 while "The Taj Hotel" in City market has the lowest avg price around ₹ 30 .

Basavanagudi has the most reviewed restaurant with over 5 lakh+ reviews in total.

North Indian cuisine the most preferred cuisine by the consumers and hence are provided the most

You are hired in a consultancy firm , one of their client want to open a remote kitchen (Only delivery) in Bangalore suggest them which location will be suitable for their restaurant and what should be the price of different types of dishes in early days.

- As per our analysis, the person should prefer opening his/her cloud kitchen in Shanti Nagar or Basavanagudi, since the place is having less no of restaurant which reduces the competition and it has some of the expensive restaurants in the Bangalore, hence the person can deliver food at lower price which reduces the competition even further.
- The second suggestion would be sell North Indian, South Indian cuisines as they are demanded the most by the customers and they can keep the price ranging from 300 - 400 Rs for Non vegetarian category and 200 - 300 Rs for vegetarian category.

Problems Faced

It was difficult to Scrape the data from the Webpage as the Classes change frequently

Solution

To tackle it we used loops wherever required to iterate on the changing variable of xpath

After Extracting the data was very unclean and jumbled also some values were null

So we imported the data inside excel and performed data cleansing operation.

THANK
YOU
FOR
YOUR
PATIENCE

