Python Project of Restaurant Data

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BUSINESS PROBLEM STATMENT

Restaurants in various cities are facing challenges in attracting and retaining customers, leading to inconsistent sales and varying levels of customer satisfaction.

The key issues include:

1. **Identifying Popular Cuisines and Services: Restaurants struggle to identify the most popular cuisines and services that attract customers in different regions.**
2. **Understanding Customer Feedback: There is a need to analyse customer reviews to understand the factors contributing to positive or negative dining experiences.**
3. **Optimizing Pricing and Service Offerings: Determining the right pricing strategies and service offerings, such as online delivery is crucial for meeting customer expectations and increasing revenue.**

O B J E C T I V E

- To leverage the dataset to Identify trends and patterns in customer preferences and behaviour.
- Understand the impact of different services and offerings on customer satisfaction and sales.
- Develop actionable insights to improve restaurant performance, customer satisfaction, and profitability.

TABLE OF CONTENT

LEVEL 1

Task1 : Top Cuisines

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

Task2 : 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

Task3 : 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.

Task4 : Online Delivery

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

LEVEL 2

Task1 : Restaurant Ratings

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

Task2: Cuisine Combination

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

LEVEL 2

Task3 : 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.

Task4: Restaurant Chains

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

GUIDED STEPS OF PYTHON

step 1

Import Necessary Libraries

The required libraries installed and then import them :
import pandas as pd
import matplotlib.pyplot as plt
from sklearn.cluster import DBSCAN

step 2

Load the Dataset

Load the dataset into a pandas DataFrame.

step 3

Explore the Dataset

Check the first few rows and understand the structure of the dataset.

step 4

Data Cleaning and Preprocessing

Handle Missing Values: Identify and handle missing values appropriately.
Data Type Conversion: Convert data types if necessary (e.g., dates, numerical columns).
Normalization: Normalize data for consistent formatting (e.g., text casing).

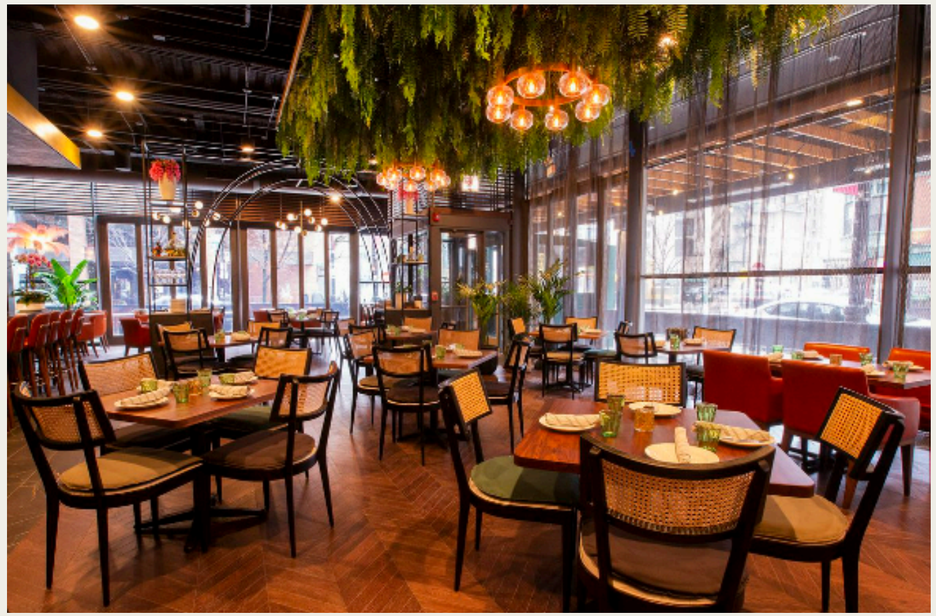
step 5

Exploratory Data Analysis (EDA)

Distribution of Ratings: Visualize the distribution of restaurant ratings.
Cuisine Analysis: Identify the most common cuisines.
Service Analysis: Analyse the availability of services like online delivery.
Customer Feedback Analysis: visualize the most common words in positive and negative reviews.
Geographic Analysis: Plot the locations of restaurants to identify geographic patterns or clusters.

REPORTING AND INSIGHTS

Summarize the key findings and insights from the data analysis. Use visualizations and descriptive statistics to communicate the results effectively.



Recommendations

Based on the analysis, provide data-driven recommendations for the business. This could include suggestions on service improvements, marketing strategies, or operational changes.

Thank you!

OUR NUMBERS

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Ingoude
Company

OUR NUMBERS

Our revenue projections over the next two years are very promising, with expected revenue tripling from year one to year two.

This growth is a testament to the strength of our product and the dedication of our team to driving success.

Ingoude Company