Zomato Restaurant Ratings Machine Learning Model

Under the Guidance of

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2022

ABSTRACT

Zomato is one of the best online food delivery apps which gives users ratings and reviews on restaurants all over India. These ratings and Reviews are considered one of the most important deciding factors which determine how good a restaurant is.

Therefore I have used the real-time Data set with various features a user would look into regarding a restaurant. I have considered Banglore City in this analysis.

Content The basic idea of analyzing the Zomato dataset is to get a fair idea about the factors affecting the establishment of different types of restaurants at different places in Bengaluru, the aggregate rating of each restaurant, Bengaluru being one such city has more than 12,000 restaurants with restaurants serving dishes from all over the world.

With each day new restaurants opening the industry hasn't been saturated yet and the demand is increasing day by day. In spite of increasing demand, it however has become difficult for new restaurants to compete with established restaurants. Most of them serve the same food. Bengaluru is the IT capital of India. Most of the people here are dependent mainly on restaurant food as they don't have time to cook for themselves.

With such an overwhelming demand for restaurants, it has therefore become important to study the demography of a location. What kind of food is more popular in a locality. Do the entire locality loves vegetarian food? If yes then is that locality populated by a particular set of people for eg. Jain, Marwaris, and Gujaratis who are mostly vegetarian? These kinds of analyses can be done using the data, by studying factors such as

• Location of the restaurant
• Approx Price of food
• Theme-based restaurant or not
• Which locality of that city serves that cuisine with maximum number of restaurants
• The needs of people who are striving to get the best cuisine in the neighborhood
• Is a particular neighborhood famous for its own kind of food.

"Just so that you have a good meal the next time you step out"

The data is accurate to that available on the zomato website until 15 March 2019. The data was scraped from Zomato in two-phase.

Phase I,

In Phase, I of extraction only the URL, name, and address of the restaurant were extracted which were visible on the front page. The URL's for each of the restaurants on the zomato were recorded in the CSV file so that later the data can be extracted individually for each restaurant. The data for each neighborhood and each category can be found here.

Phase II,

In Phase II the recorded data for each restaurant and each category was read and data for each restaurant was scraped individually. 15 variables were scraped in this phase. For each of neighborhood and for each category their online order, book table, rate, votes, phone, location, rest type, disliked, cuisines, approx cost(for two people), reviews list, and menu_item was extracted.

Main Objective:
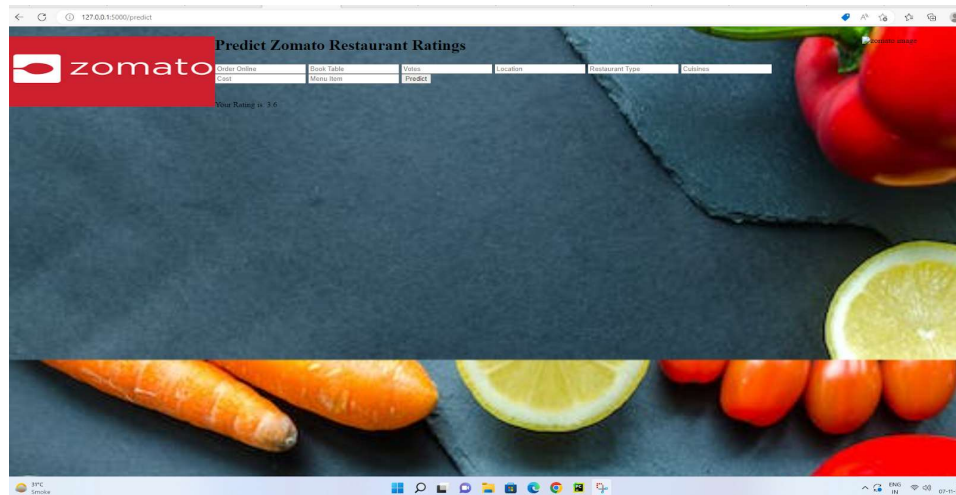
The main agenda of this project is:

> Perform extensive **Exploratory Data Analysis(EDA)** on the Zomato Dataset.

> Build an appropriate **Machine Learning Model** that will help various Zomato Restaurants to predict their respective Ratings based on certain features

> **DEPLOY** the Machine learning model via **Flask** that can be used to make live predictions of restaurant ratings.

Source: Kaggle

Machine Learning Model Picture:

Dataset Link:
https://drive.google.com/file/d/1eWhoMCy771RxLLaxFWlZAgp6P2yxV24b/view?usp=sharing

Exploratory Data Analysis(EDA) Github Link :
https://github.com/anshukumar032/All-Data-Analysis-Projects/blob/main/zomato_restaurant_ratings.ipynb

Google Colab Link:
https://colab.research.google.com/drive/1ud8mReBUxEHrq2fG7bSrqzRT1l-oHGBj?usp=sharing

Machine Learning Model & Deployment on Flask is the file :
https://drive.google.com/file/d/1DIjj9-NGy1iNURZbcnE6BZ4wZAIFc8VO/view?usp=sharing

Working video of ML Model: https://photos.app.goo.gl/U5S8xMrwH3NUGvnA6

Thank You, Sir.