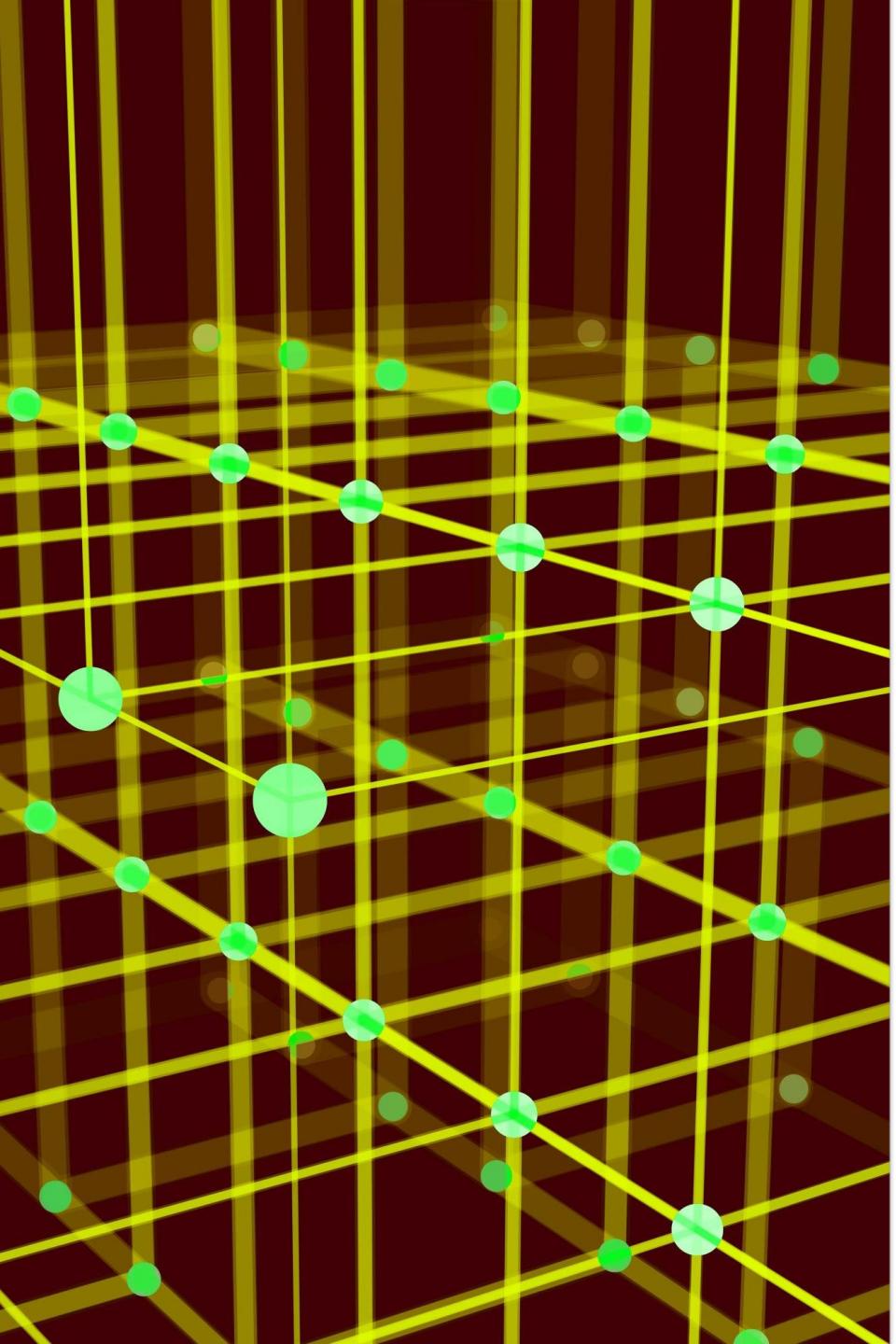




# PROXENIX COMPANY INTERNSHIP

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# ZOMATO DATA ANALYSIS



# TOPICS

- Overview of Zomato Dataset
- Technologies Used
- Customer Behavior Analysis
- Restaurant Performance Analysis
- Geospatial Analysis
- Predictive Modeling
- Conclusion and Recommendations



# INTRODUCTION TO ZOMATO

## □ What is Zomato?

- Zomato is a popular Indian food delivery and restaurant discovery platform. It was founded in 2008 by Deepinder Goyal and Pankaj Chaddah.

## □ Services Offered

- Zomato offers a range of services, including:
  - Restaurant Discovery: Zomato allows users to discover new restaurants and cuisines in their area.
  - Food Delivery: Zomato partners with local restaurants to offer food delivery services to users.
  - Table Booking: Zomato allows users to book tables at restaurants in advance.
  - Reviews and Ratings: Zomato enables users to leave reviews and ratings for restaurants, helping others make informed decisions.

## □ Key Features

- Some of Zomato's key features include:
  - User-Friendly Interface: Zomato's app and website are easy to use and navigate.
  - Personalized Recommendations: Zomato offers personalized restaurant and cuisine recommendations based on users' preferences.
  - Real-Time Updates: Zomato provides real-time updates on restaurant availability, delivery times, and more.
  - Secure Payment Options: Zomato offers secure payment options, including online payment, cash on delivery, and more.

# Technologies Used in Zomato



## Frontend Technologies

React.js / HTML, CSS, JavaScript  
Flutter, React Native



## Databases

MySQL, PostgreSQL,  
MongoDB, Cassandra



## Data Visualization & BI

Tableau, Power BI  
Looker



## APIs & Integrations

## Data Analysis & Machine Learning

Python (Pandas, NumPy, Scikit-learn, TensorFlow)  
Apache Spark, Hadoop



## Cloud & Integrations

Google Maps API | Payment Gateways  
(Razorpay, Paytm, etc.)



## AI & Personalization

Recommendation  
Engines  
Sentiment Analysis



## Security & Privacy

OAuth, JWT Tokens  
Data Encryption



## Location Services

# TECHNOLOGIES USED

# CUSTOMER BEHAVIOR ANALYSIS

- ✓ Customer behavior analysis is the process of collecting, analyzing, and interpreting data about customer interactions with a product or service. In the context of Zomato, this involves studying how customers use the platform, what features they engage with, and how they make purchasing decisions.
- Why is Customer Behavior Analysis Important?
  1. Improve Customer Experience: By understanding how customers interact with the platform, Zomato can identify areas for improvement and optimize the user experience.
  2. Increase Conversions: By analyzing customer behavior, Zomato can identify the most effective ways to encourage customers to make purchases.
  3. Enhance Customer Retention: By understanding what drives customer loyalty, Zomato can develop strategies to retain customers and prevent churn.
  4. Inform Business Decisions: Customer behavior analysis provides valuable insights that can inform business decisions, such as investments in new features or marketing campaigns.

## What Types of Customer Behavior are Analyzed?

Some examples of customer behavior that may be analyzed in the context of Zomato include:

- Search and Browsing Behavior: How customers search for restaurants, filter results, and browse menus.
- Purchasing Behavior: How customers make purchasing decisions, including what factors influence their choices.
- Rating and Review Behavior: How customers rate and review restaurants, and what drives them to leave feedback.
- Navigation and Engagement: How customers navigate the platform, and what features they engage with.

## How is Customer Behavior Analysis Conducted?

Customer behavior analysis may involve a range of methods, including:

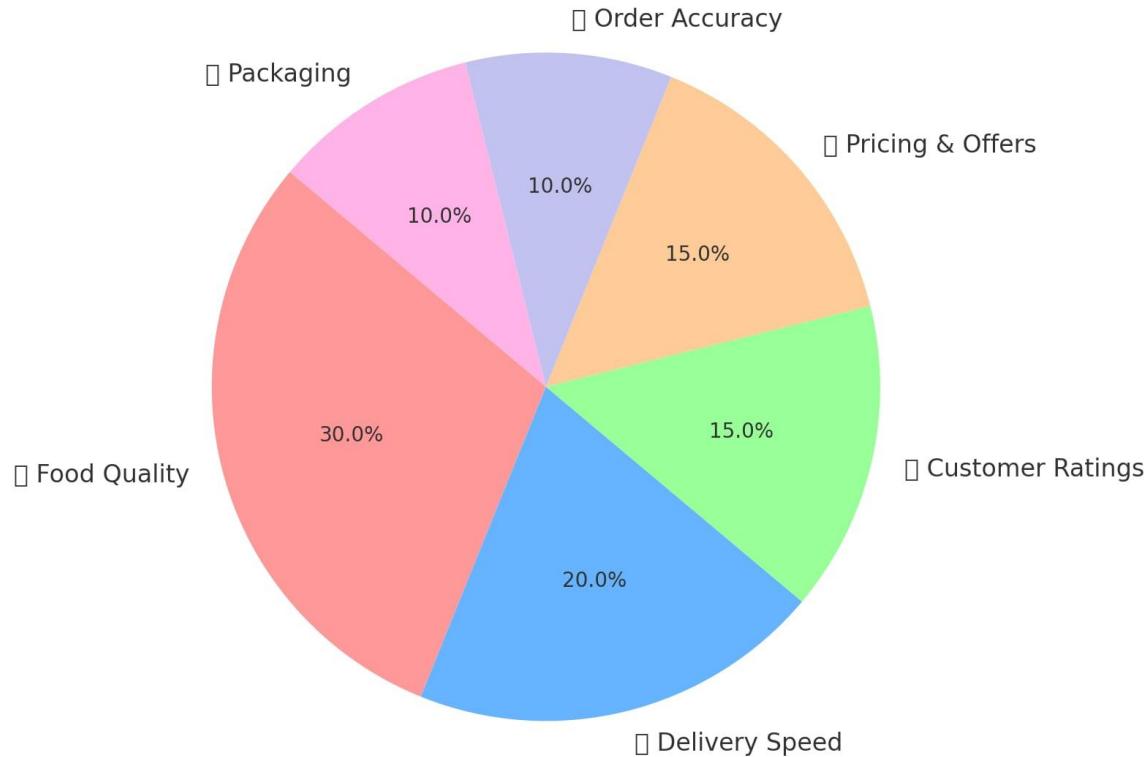
- Web Analytics Tools: Tools like Google Analytics provide insights into customer behavior on the Zomato website and mobile app.
- Surveys and Feedback Forms: Surveys and feedback forms can provide qualitative insights into customer behavior and preferences.
- A/B Testing: A/B testing involves comparing different versions of a feature or interface to determine which one performs better.
- Machine Learning Algorithms: Machine learning algorithms can be applied to customer behavior data to identify patterns and predict future behavior.

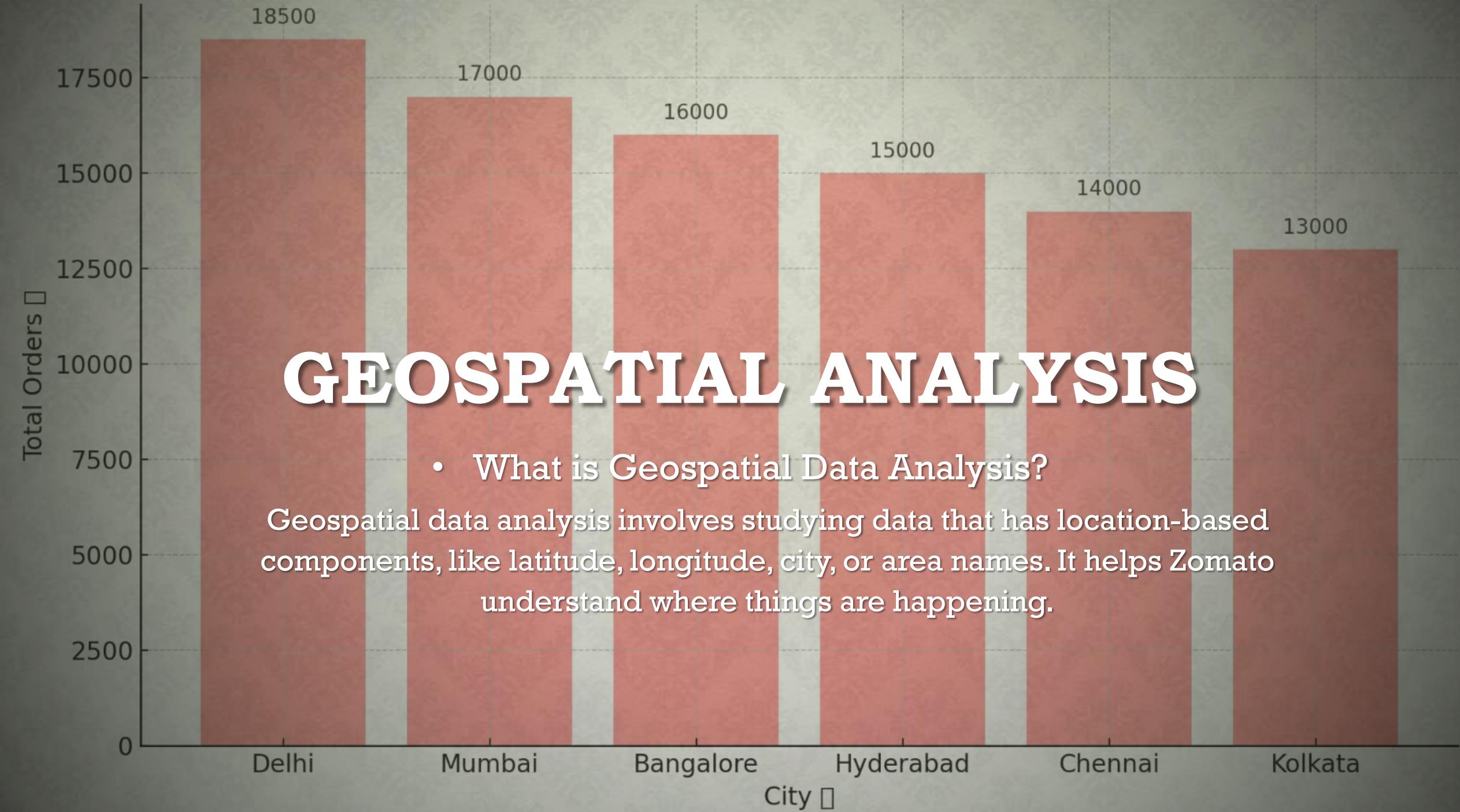


# RESTAURANT PERFORMANCE ANALYSIS

- Restaurant performance analysis is the process of reviewing key metrics to understand how well a restaurant is doing. It helps in improving services, identifying customer trends, and boosting profitability.
  
- Key factors analyzed:
- Sales & Revenue
- Order Volume
- Customer Ratings
- Popular Dishes
- Delivery Time
- Return Customers

## Zomato Restaurant Success Slice ☰





# PREDICTIVE DATA ANALYSIS

- Predictive analysis uses historical data + machine learning + statistical algorithms to predict future outcomes. In Zomato, it helps improve customer experience, optimize restaurant operations, and drive business decisions.

## □ Applications of Predictive Analysis in Zomato:

### 1. Order Volume Prediction

- Analyzes time, day, location, and season.
- Example: Predicts a surge in pizza orders on weekends or during IPL matches.

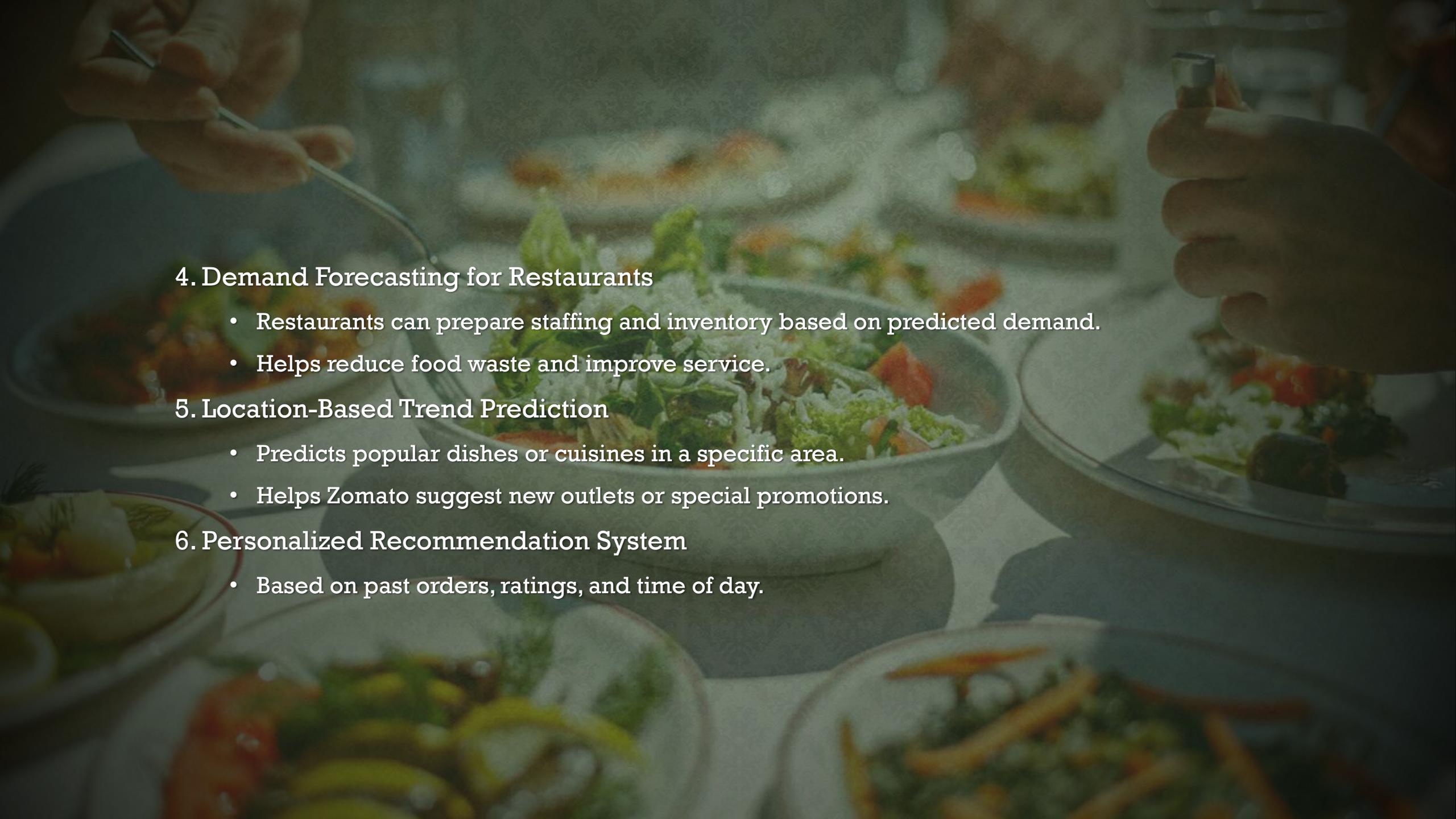
### 2. Delivery Time Forecasting

- Uses traffic data, weather, and distance to estimate accurate delivery time.
- Helps in auto-assigning delivery partners more efficiently.

### 3. Customer Churn Prediction

- Identifies users who may stop using the app.
- Personalized offers or notifications are sent to retain them.





#### 4. Demand Forecasting for Restaurants

- Restaurants can prepare staffing and inventory based on predicted demand.
- Helps reduce food waste and improve service.

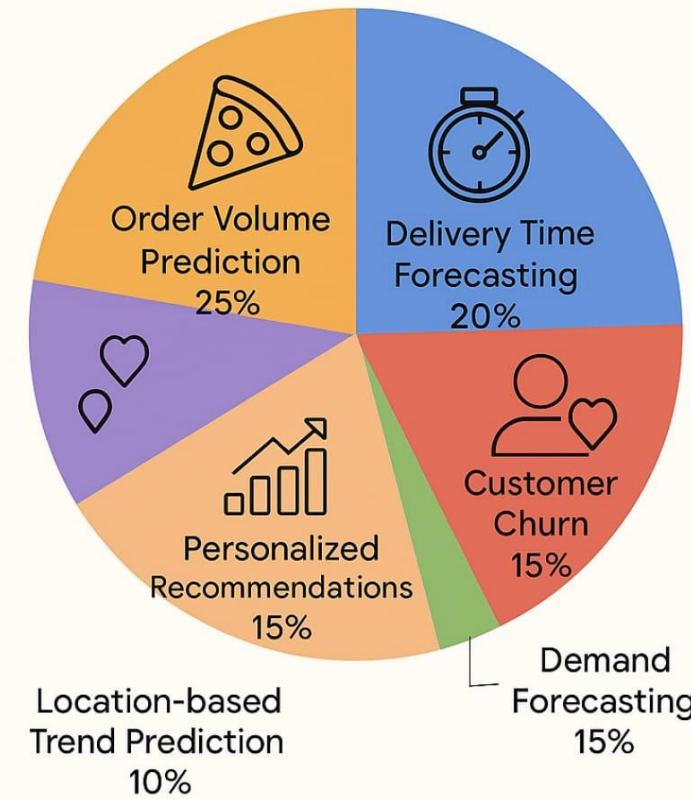
#### 5. Location-Based Trend Prediction

- Predicts popular dishes or cuisines in a specific area.
- Helps Zomato suggest new outlets or special promotions.

#### 6. Personalized Recommendation System

- Based on past orders, ratings, and time of day.

## Predictive Data Analysis in Zomato



# CONCLUSION AND RECOMMENDATION

## Conclusion of Zomato Data Analysis

After analyzing Zomato's customer behavior, restaurant performance, geospatial trends, and predictive models, we conclude:

### 1. Customer Patterns are Predictable

- Time-based, age-wise, and location-based ordering behaviors are clearly identifiable.
- Peak order times are usually evenings and weekends.

### 2. Restaurant Performance Varies by Location & Cuisine

- Top-performing outlets offer fast service, accurate listings, and better reviews.
- Regional preferences influence cuisine popularity.

### 3. Personalization Drives Engagement

- Personalized recommendations and discounts based on past orders significantly increase customer retention.

### 4. Predictive Analysis is Effective

- Delivery time, order volume, and customer churn can be predicted with high accuracy using ML models.

## ❖ Recommendations

### 1. Enhance Predictive Algorithms

- Use real-time data (traffic, weather, events) to refine delivery predictions.

### 2. Boost Regional Curation

- Promote local favorite dishes in specific cities (e.g., Biryani in Hyderabad, Chhole Bhature in Delhi).

### 3. Dynamic Pricing & Offers

- Implement AI-driven offers based on user behavior and order frequency.

### 4. Restaurant Onboarding & Training

- Help restaurants with data-driven insights on how to improve ratings and reduce delivery time.

### 5. Geo-Based Marketing

- Use geospatial analysis to target ads/offers in high-order-density areas.