FOOD HUB CASE STUDY

BACKGROUND

The app tracks food preparation time and delivery time using time stamps from the restaurant, delivery person and customer.

Foodhub is an online portal with a wide selection of restaurants and takeouts in local areas.

FOODHUB™

Their app allows customers to send orders to local restaurants and have a meal delivered to their door.

The money they earn is from a fixed margin of the delivery order from the restaurants. No customer fees.

OBJECTIVE

To extract actionable insights from the data collected from registered customers in their online portal and identify areas of demand for individual restaurants effort to improve quality of service and delivery times.

We will focus on these aspects:

- What insights from customer ratings can we use to help improve service

- Individual restaurants that are in high demand and cuisine type

- Customer demand during the weekday and on weekends

- The relationship between the preparation time, delivery time and total delivery time

DATA OVERVIEW

Variable	Description
order_id	Unique ID of the order
customer_id	ID of the customer who ordered the food
restaurant_name	Name of the restaurant
cuisine_type	Cuisine ordered by the customer
cost	Cost of the order
day_of_the_week	Indicates whether the order is placed on a weekday or weekend (The weekday is from Monday to Friday and the weekend is Saturday and Sunday)
rating	Rating given by the customer out of 5
food_preparation_time	Time (in minutes) taken by the restaurant to prepare the food.
delivery_time	Time (in minutes) taken by the delivery person to deliver the food package.

The data contains restaurant name, cuisine type, cost of order, day of the week, rating, food preparation time and food delivery time.

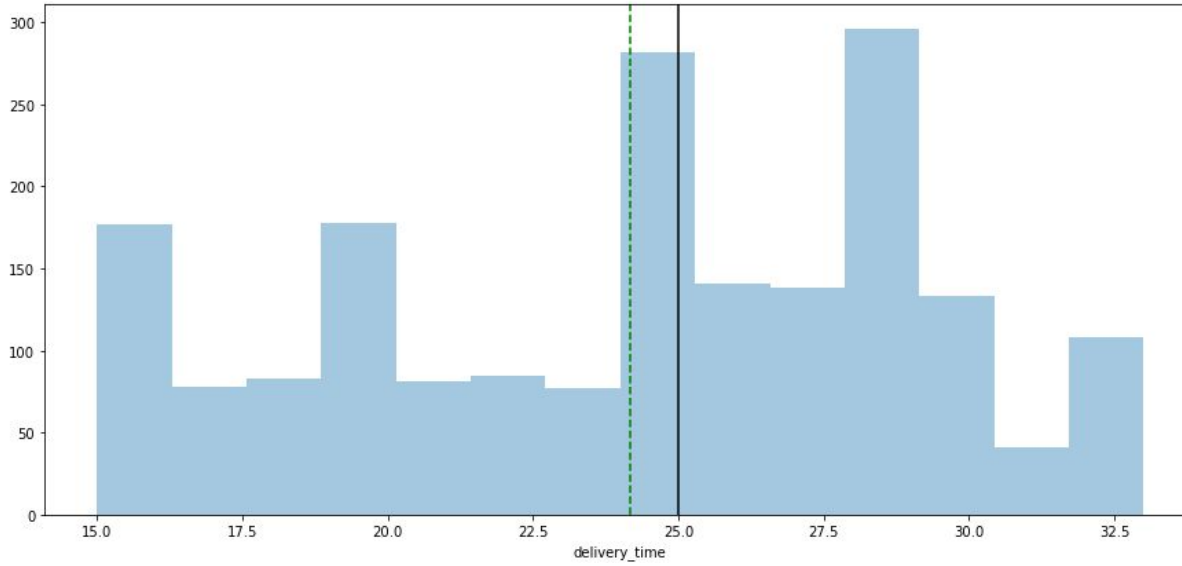| Observations	Variables
1898	9

EXPLORATORY DATA ANALYSIS (EDA)
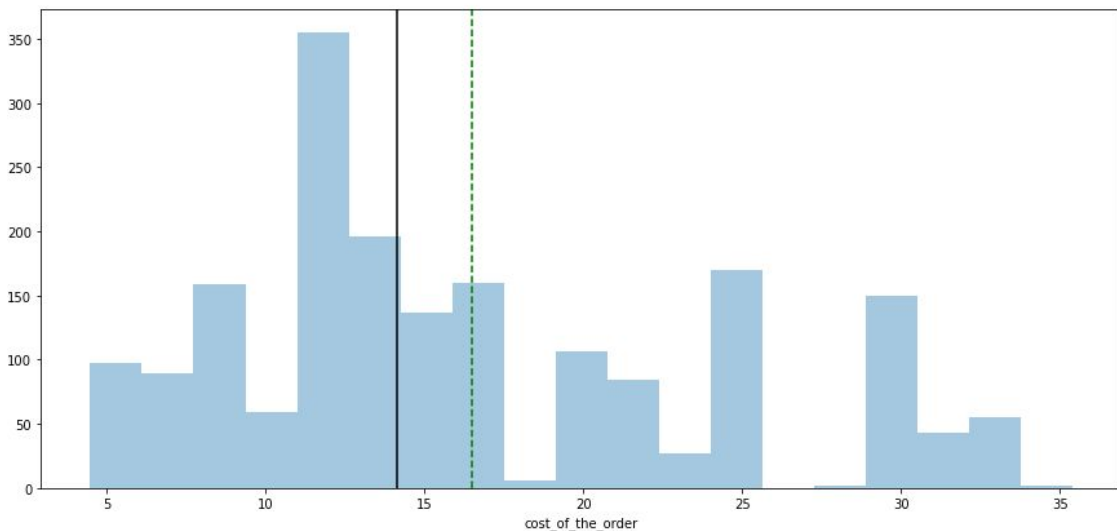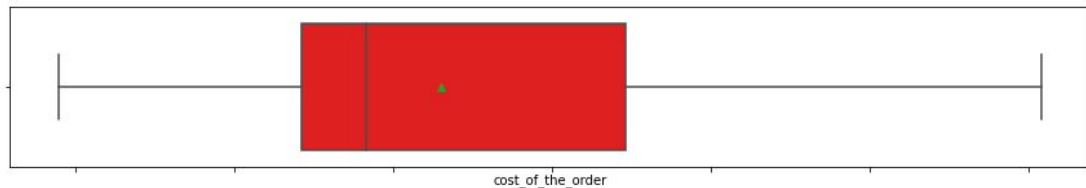
Observations

- There are no outliers in the distribution of the cost of the order.
- The distribution of the cost has a slight positive skew.
- The price with the most observations is ~$12.
- The orders in the higher end of the price range have more variability than the orders in the lower price range.
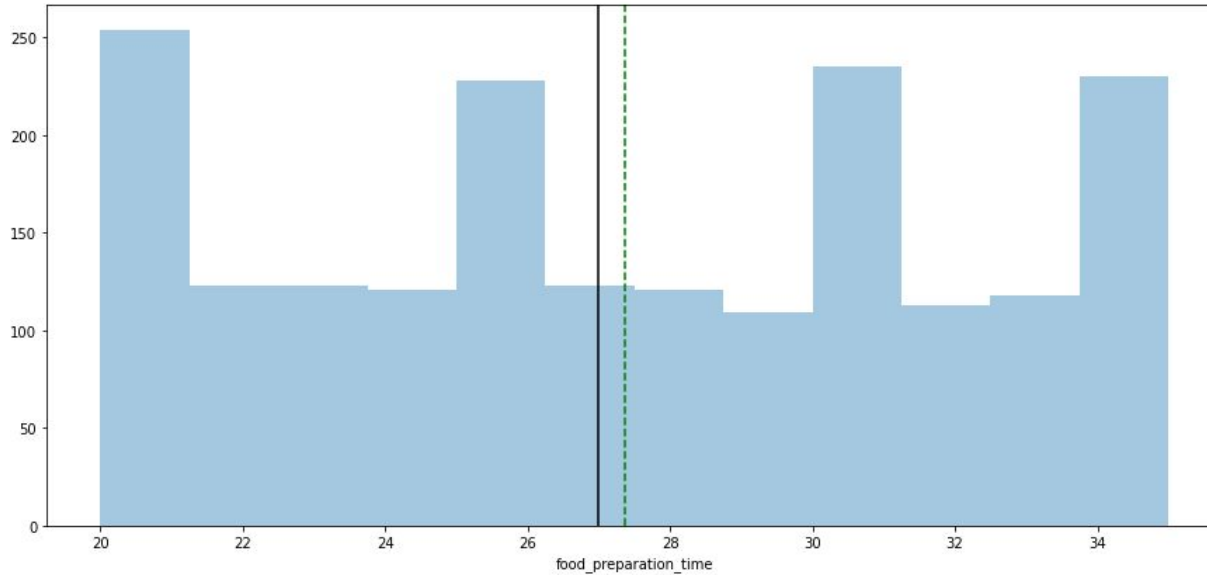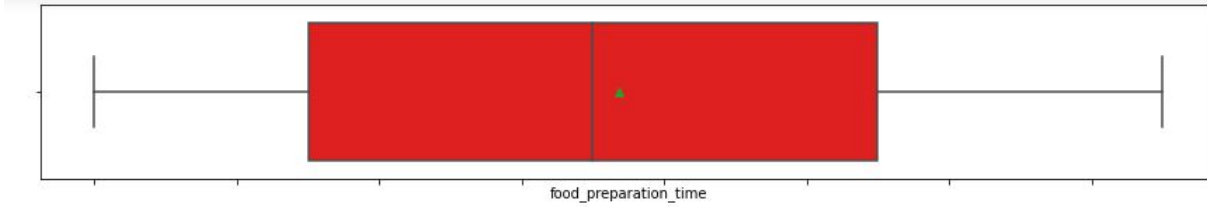
Observations:

- The food delivery time does not have any outliers.
- The mean and the median of the distribution of the delivery times are close in value. The mean delivery time (~ 24 mins) is less than the median delivery time (~ 25 mins).
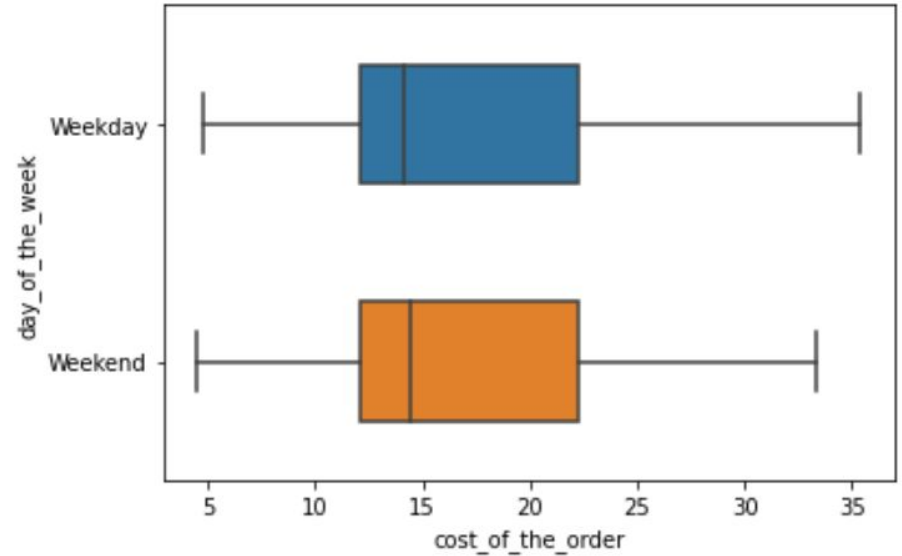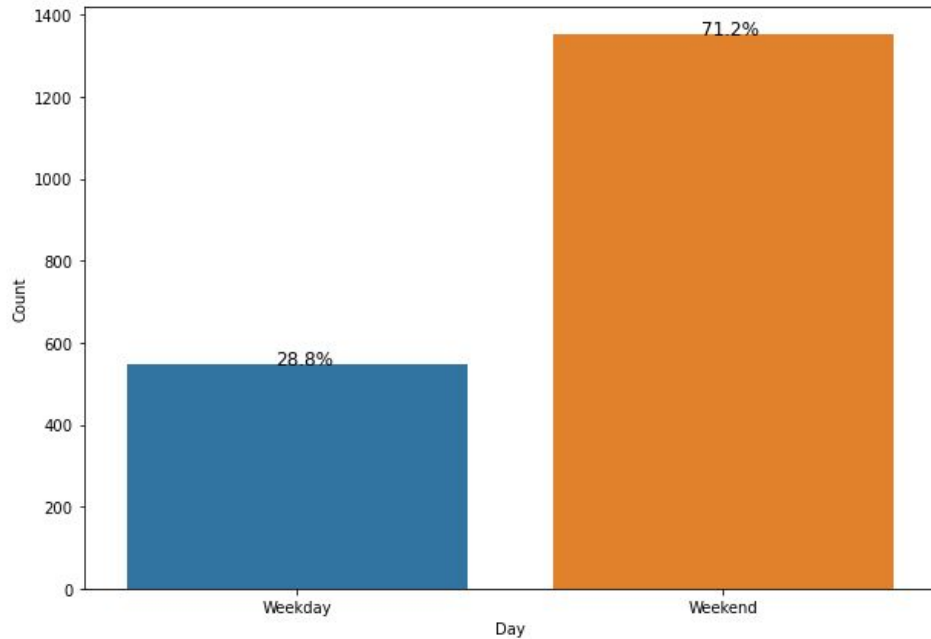- There is less variability on delivery times in the upper 50 percentile.

Observations

- The food preparation time does not have any outliers.
- The distribution of the food preparation time is fairly symmetric with 4 peaks around 20, 26, 31 and 34 minutes.
- The mean and the median are both in the center of the distribution around 27 minutes.
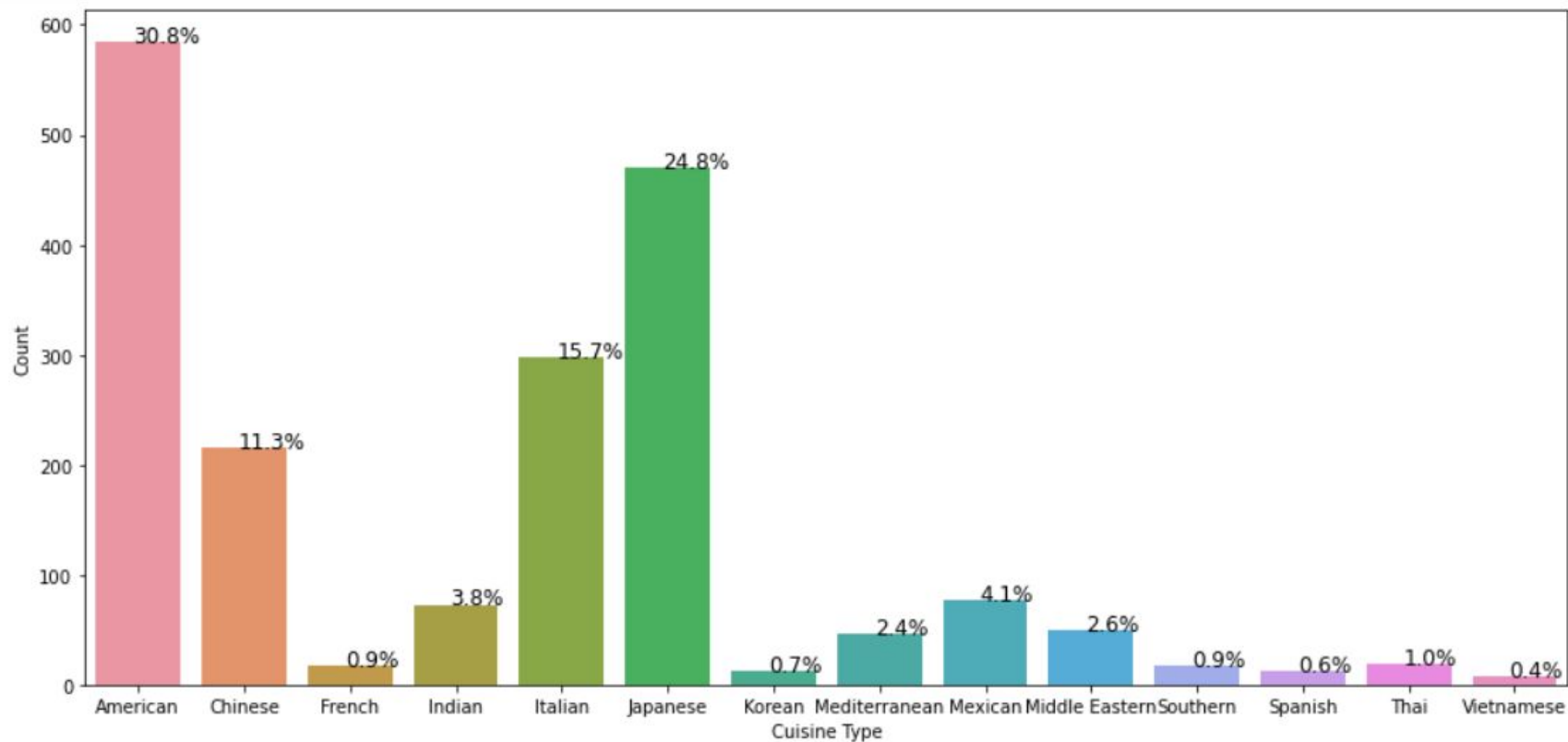
Observations

- 71.2% of orders are placed on the weekend.
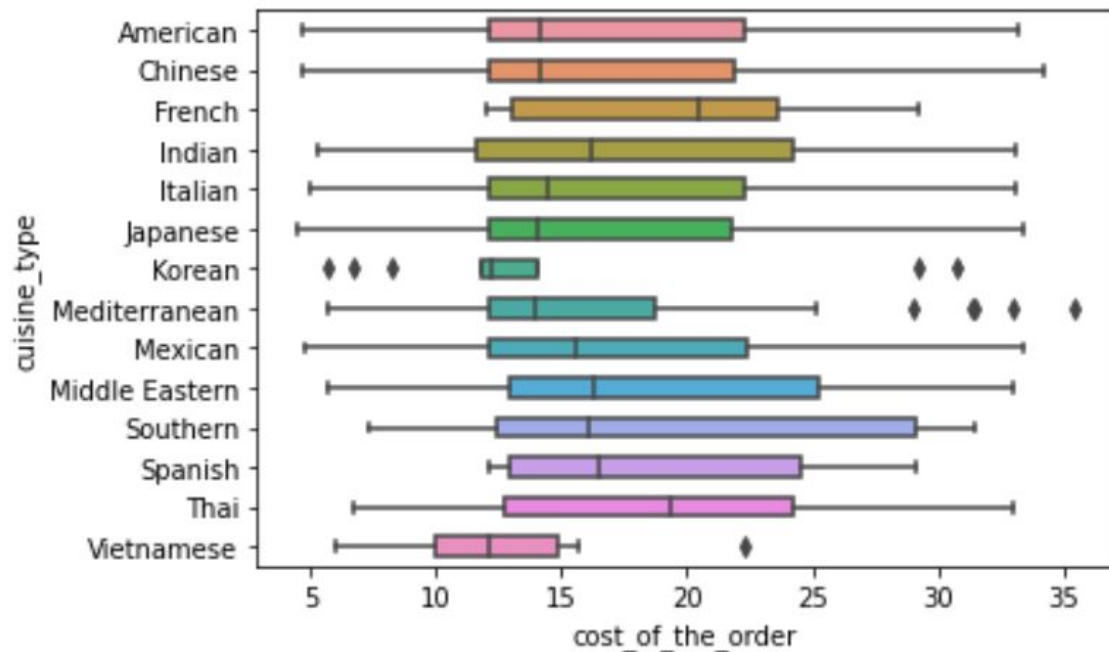- The day of the week does not impact the cost of the order.

Observations

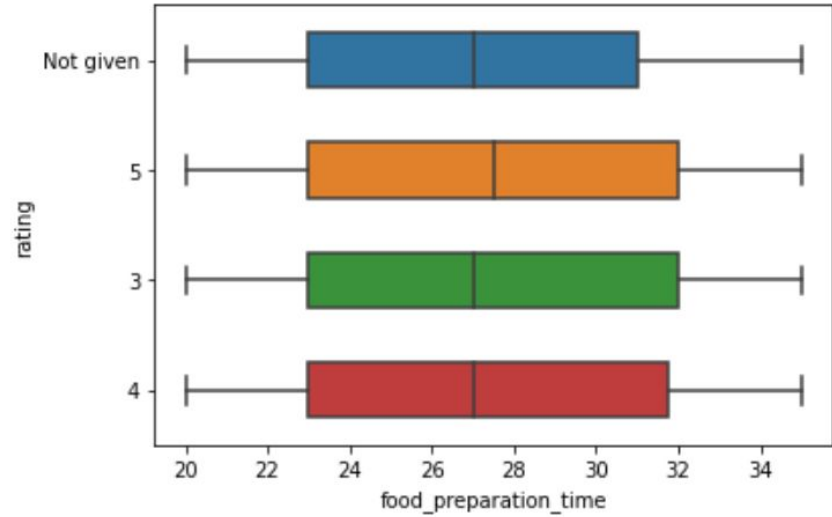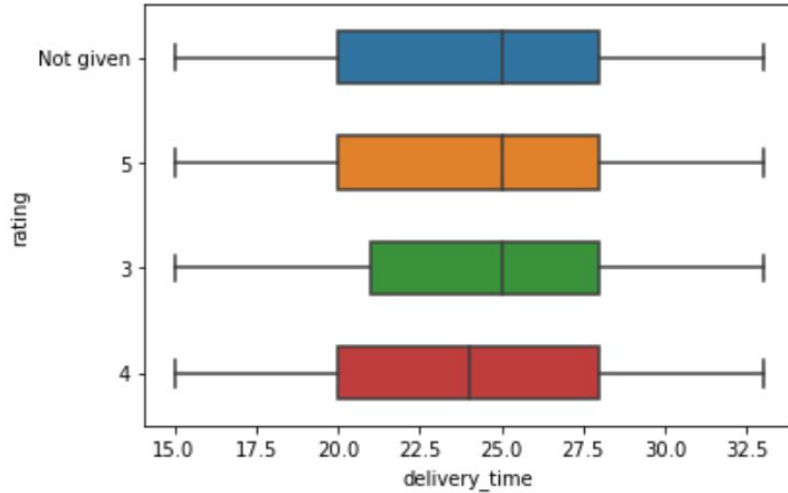- American and Japanese cuisine account for over half of the orders.

Observations

- All the cuisine types, with the exception of French, have a median order price of less than $20.

Observation

- Food preparation time and delivery time do not appear to have an impact on customer rating.

BUSINESS INSIGHTS AND RECOMMENDATIONS

Insights:

We analyzed the data from 1,898 Food Hub food orders made from an online portal. We looked at the demand by restaurant, weekday and cuisine type. We also analyzed delivery time in terms of food preparation time, delivery time (restaurant to customer) and total delivery time (food preparation time combined with delivery time). Customer ratings were also analyzed.

We have been able to conclude:

1. Almost 40% of orders go unrated by customers.
2. The majority of the orders are under $15.
3. Food preparation time and delivery time have ranges of around 12 minutes
4. The majority of the orders are placed on the weekend.
5. American and Japanese food account for more than 50% of the cuisine type.
6. There doesn't seem to be an association between the food preparation time, food delivery time and cost of the order.
7. Delivery time, food preparation time and cost of the order do not seem to have an impact on the rating of an order.

Recommendations to business

1. The majority of ratings are from satisfied customers and a large percentage of orders go unrated. For improved analysis of a customers experience, an increase in the participation in rating orders will offer more insight.
2. The weekends have over 50% more orders than the weekday. Provide customers with more incentive to order through Food Hub portal during the week.
3. American and Japanese food are the most ordered cuisine type. Promotion and increased business from American and Japanese restaurants can generate more orders.
4. Food appears to be prepared and delivered at a reasonable and consistent time, regardless of order price, this information is good for business and can be used to promote the use of the service.
5. Since the majority of the orders are under $15 dollars, a slight increase in the charged on those orders will increase revenue.