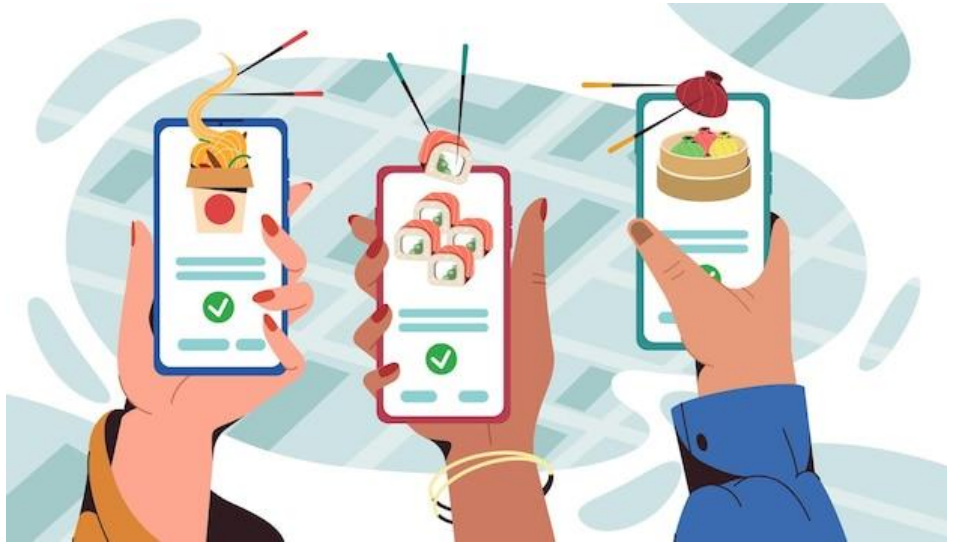
FoodHub Data Analysis and Recommendations



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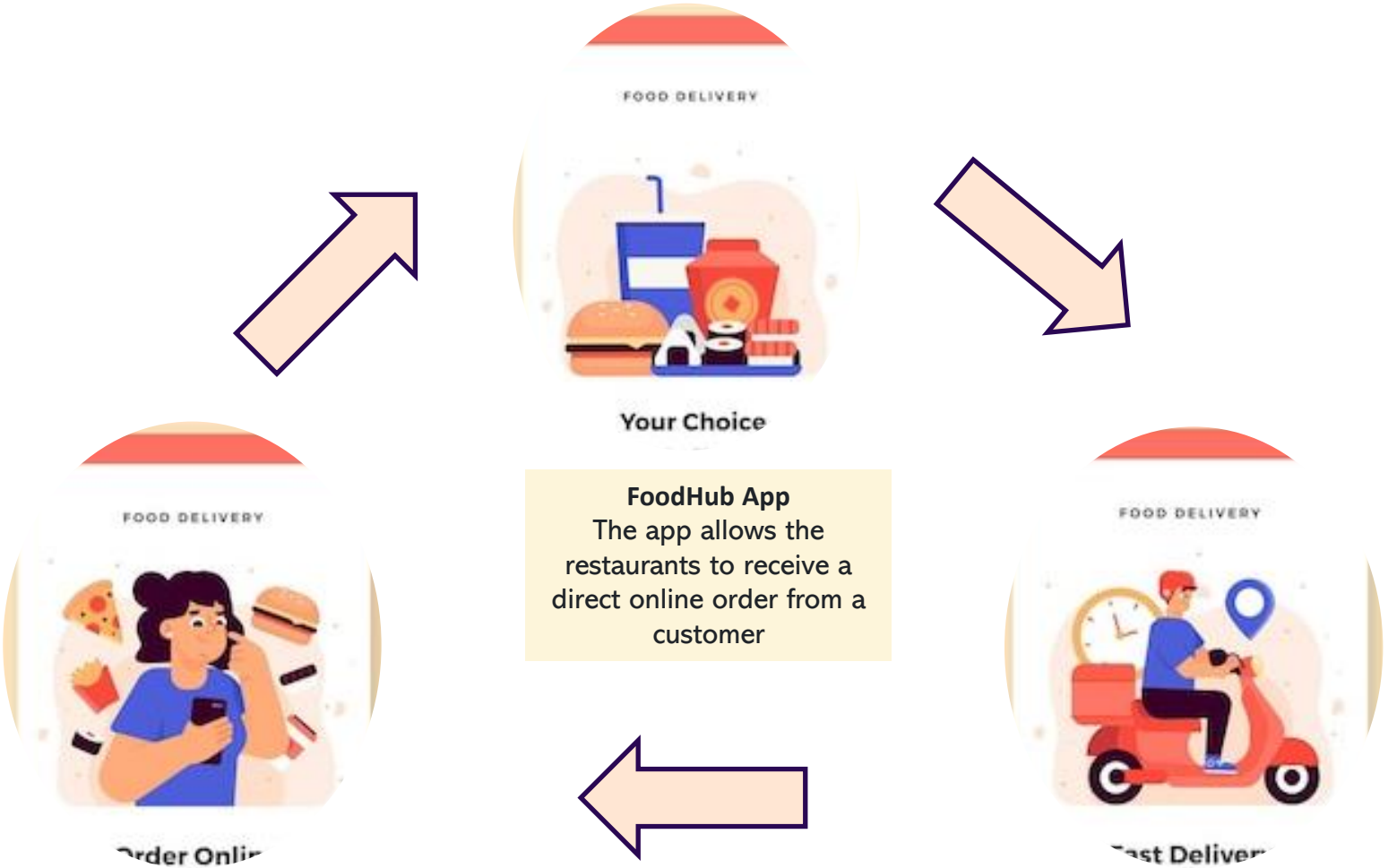
C. Rudder

FoodHub Data Analysis and Recommendations – Who?

A food aggregator company FoodHub offers access to multiple restaurants through a single smartphone app.



FoodHub App
The app allows the restaurants to receive a direct online order from a customer

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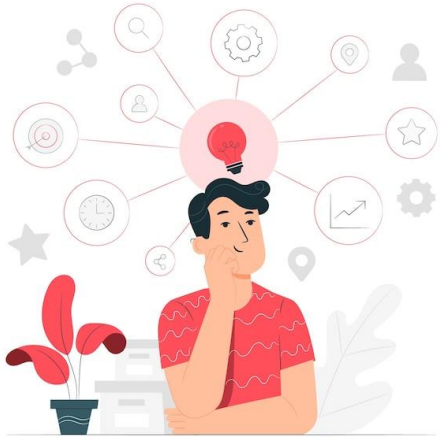
FoodHub Data Analysis and Recommendations – What?



The food aggregator company has stored the data of the different orders made by the registered customers in their online portal.

They want to analyze the data to get a fair idea about the demand of different restaurants which will help them in enhancing their customer experience.

Analyze data to **gain insight** into the demand of the different restaurants in order to enhance the customer experience.

1. Which are the top 5 restaurants in terms of the number of orders received?
2. Which is the most popular cuisine on weekends?
3. What percentage of the orders cost more than 20 dollars?
4. What is the mean order delivery time?
5. What is the net revenue generated by the company across all orders?
6. What percentage of orders take more than 60 minutes to get delivered from the time the order is placed?
7. How does the mean delivery time vary during weekdays and weekends?

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FoodHub Data Analysis and Recommendations - How

Python libraries:
Numpy Pandas Matplotlib Seaborn

Data Analysis Strategies:
- Summary Statistics
- Exploratory Data Analysis
- Univariate Analysis
- Bivariate Analysis

The data contains the different data related to a food order.

Data Dictionary

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. This is calculated by taking the difference between the timestamps of the restaurant's order confirmation and the delivery person's pick-up confirmation.
delivery_time: Time (in minutes) taken by the delivery person to deliver the food package. This is calculated by taking the difference between the timestamps of the delivery person's pick-up confirmation and drop-off information

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FoodHub Data Analysis and Recommendations - Conclusions

There were **1898 orders** analyzed.
There are **178 unique restaurants**.
Shake Shack was the restaurant with the most orders, 219.
There are 14 unique cuisine types.
American was the most ordered cuisine with 584 orders.

Costs of the Orders
The costs of the orders range from **4.47 USD to 35.41 USD**.
29.24% (555 orders) of the orders cost **over 20 USD**.
71% (1351/1898) of the orders occur **on the weekend.**

Reviews
Food hub asks customers to review the food and 4 unique reviews were offered: 3, 4, 5, Not given.

Rating 3 – 188	Rating 5 – 588
Rating 4 – 386	**Not Given – 736 (38.7%)**

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FoodHub Data Analysis and Recommendations - Conclusions

Food Preparation and Delivery

The food preparation time ranged **20 to 35 minutes**

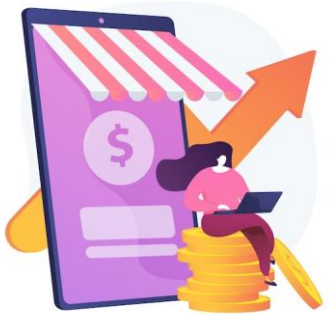
The food delivery time ranged from **15 to 33 minutes**

The mean deliver time by day of the week:

Weekday 28.34 minutes

Weekend 22.47 minutes

10% of the orders placed take over 60 minutes for delivery, from the time it was placed.



Net Revenue

Almost all orders are charged a fee:

15% for orders over '5 USD'

25% for orders over '20 USD'

The company received a **net revenue of $6166.31** across all orders.

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FoodHub Data Analysis and Recommendations

Recommendations:

1. As the mean averages are $16.50, look at how the charges are broken down.
   It may be beneficial to **increase the fee to 20% for orders over $10**.

2. To gain more reviews from the customers add a **$5 off coupon on their next order** for them leaving a review.
   This would *increase customer engagement* and *encourage return business*.

3. Foodhub could have **delivery drivers closer to the restaurants** which receive the most orders.
   The food prep and delivery had reasonable time frames with 75% taking 56 minutes or less.

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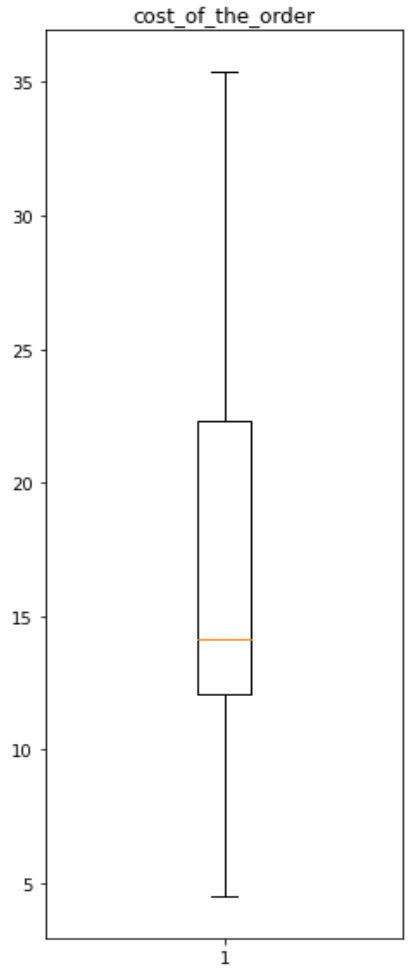
FoodHub Data Analysis - Averages

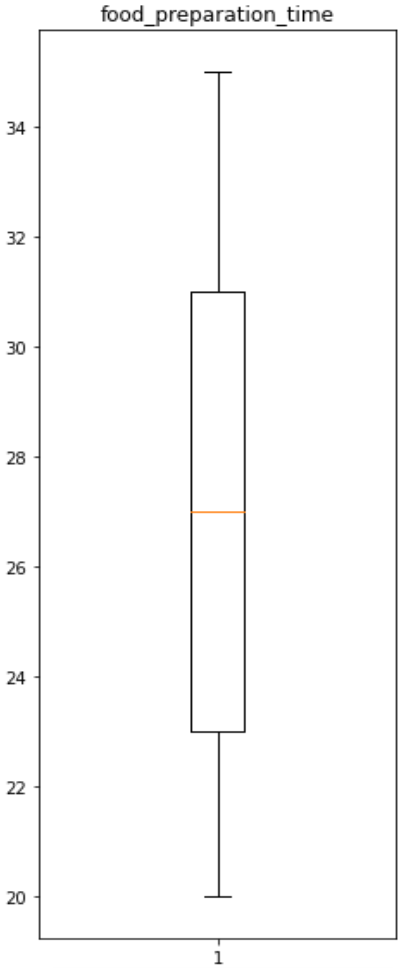
Overall means

Cost of the order – $16.50
Food Prep Time – 27.37 min
Delivery Time – 24.16 min



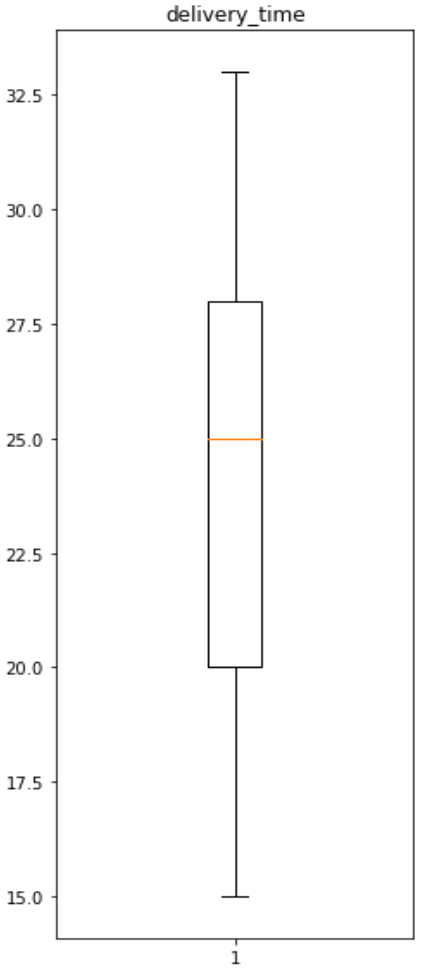
Cost of order

Median: $14.14
Minimum: $4.47
Maximum: $35.41



Food Prep Time

Median: 27 min
Minimum: 20 min
Maximum: 35 min



Delivery Time

Median: 25 min
Minimum: 15 min
Maximum: 33 min

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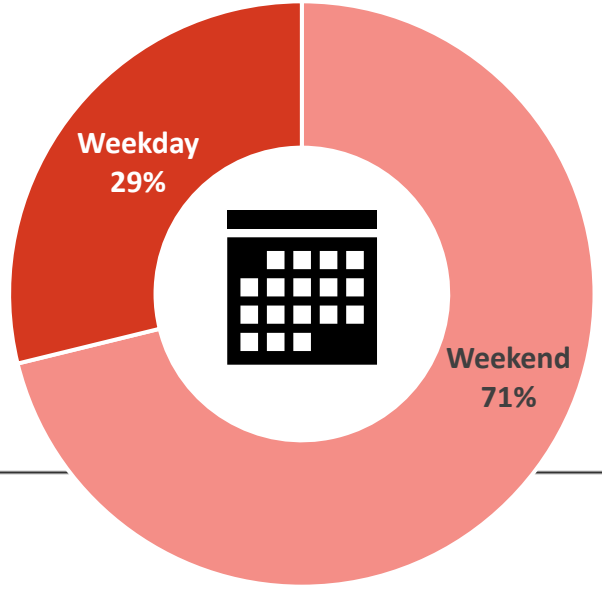
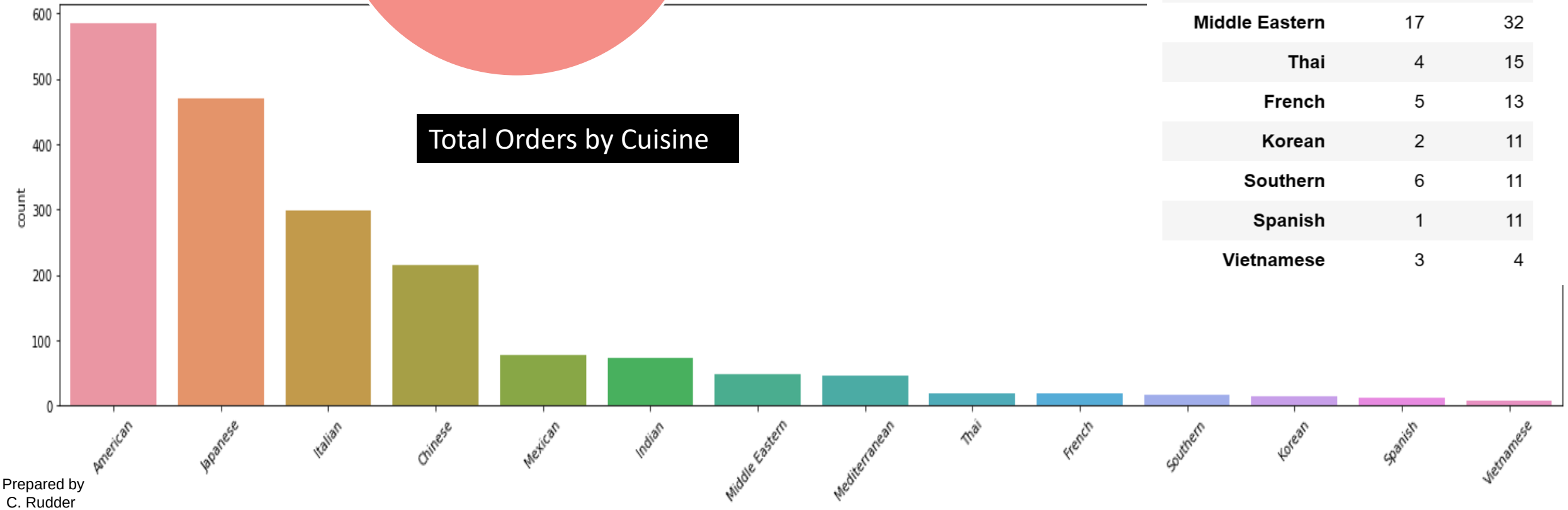
FoodHub Data Analysis – Orders



Orders
Weekday vs. Weekend

day_of_the_week cuisine_type	Weekday	Weekend
American	169	415
Japanese	135	335
Italian	91	207
Chinese	52	163
Mexican	24	53
Indian	24	49
Mediterranean	14	32
Middle Eastern	17	32
Thai	4	15
French	5	13
Korean	2	11
Southern	6	11
Spanish	1	11
Vietnamese	3	4

Total Orders by Cuisine



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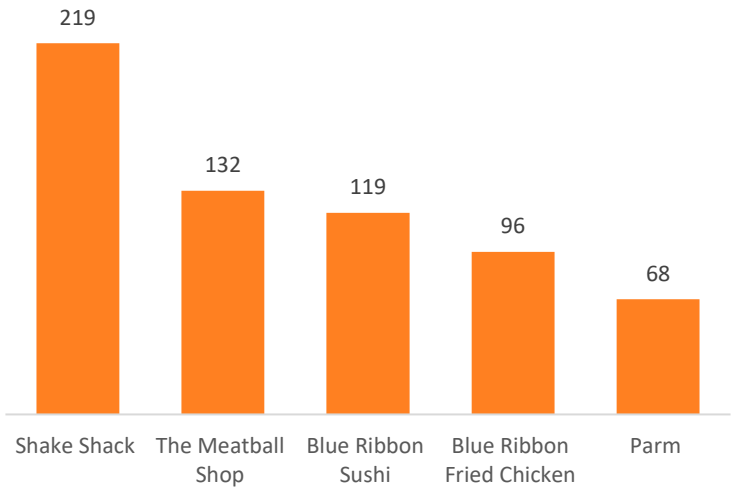
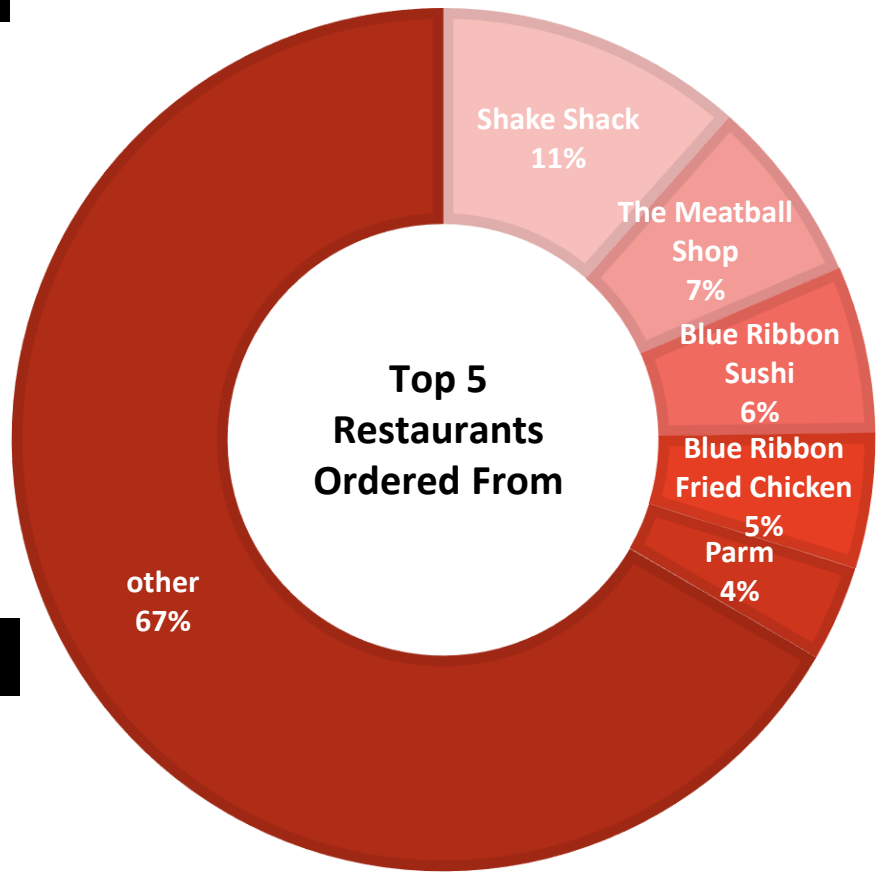
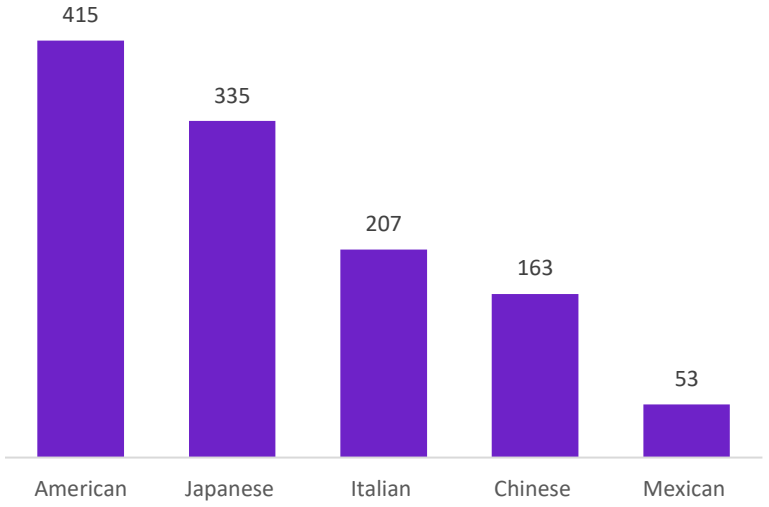
FoodHub Data Analysis – Top

Top 5 Restaurants

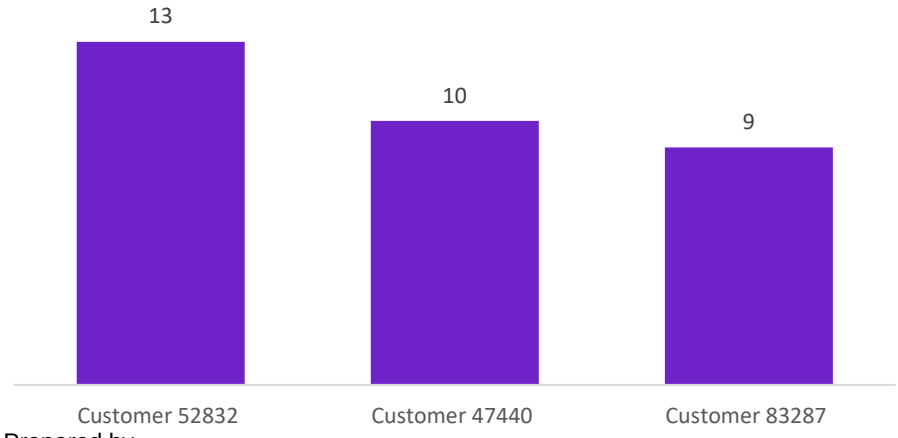




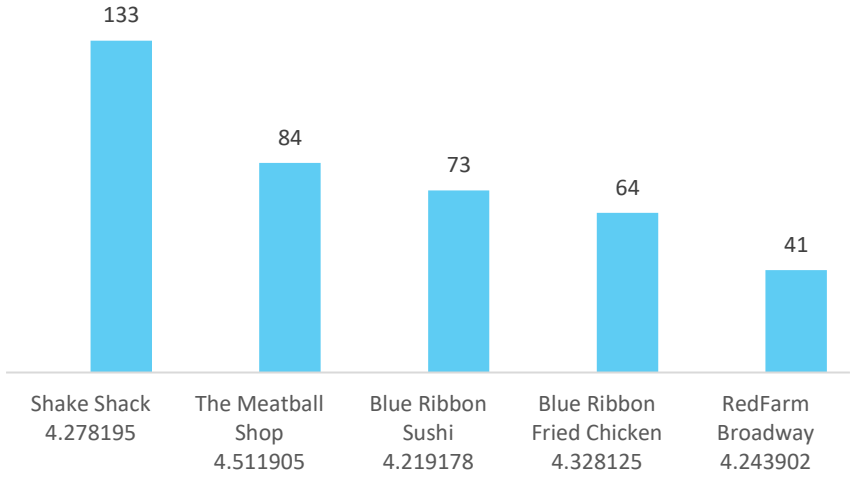
Top 5 Weekend Cuisines



Top 3 Customer



Top 5 Reviewed Restaurants



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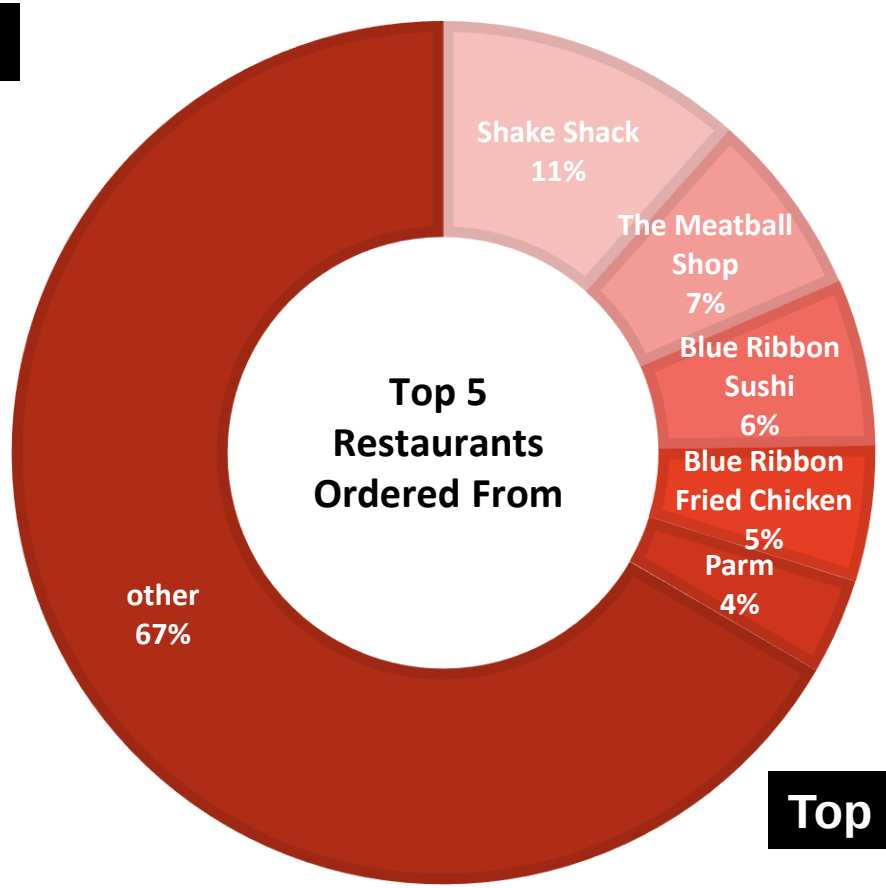
FoodHub Data Analysis – Top

Top 5 Restaurants

Shake Shack - 219 orders
The Meatball Shop - 132 orders
Blue Ribbon Sushi - 119 orders
Blue Ribbon Fried Chicken - 96 orders
Parm - 68 orders



Top 5 Weekend Cuisines

American - 415 orders
Japanese - 335 orders
Italian - 207 orders
Chinese - 163 orders
Mexican - 53 orders

Top 3 Customer

Customer 52832 - 13 orders
Customer 47440 - 10 orders
Customer 83287 - 9 orders

Top 5 Reviewed Restaurants

Shake Shack	133	4.278195
The Meatball Shop	84	4.511905
Blue Ribbon Sushi	73	4.219178
Blue Ribbon Fried Chicken	64	4.328125
RedFarm Broadway	41	4.243902

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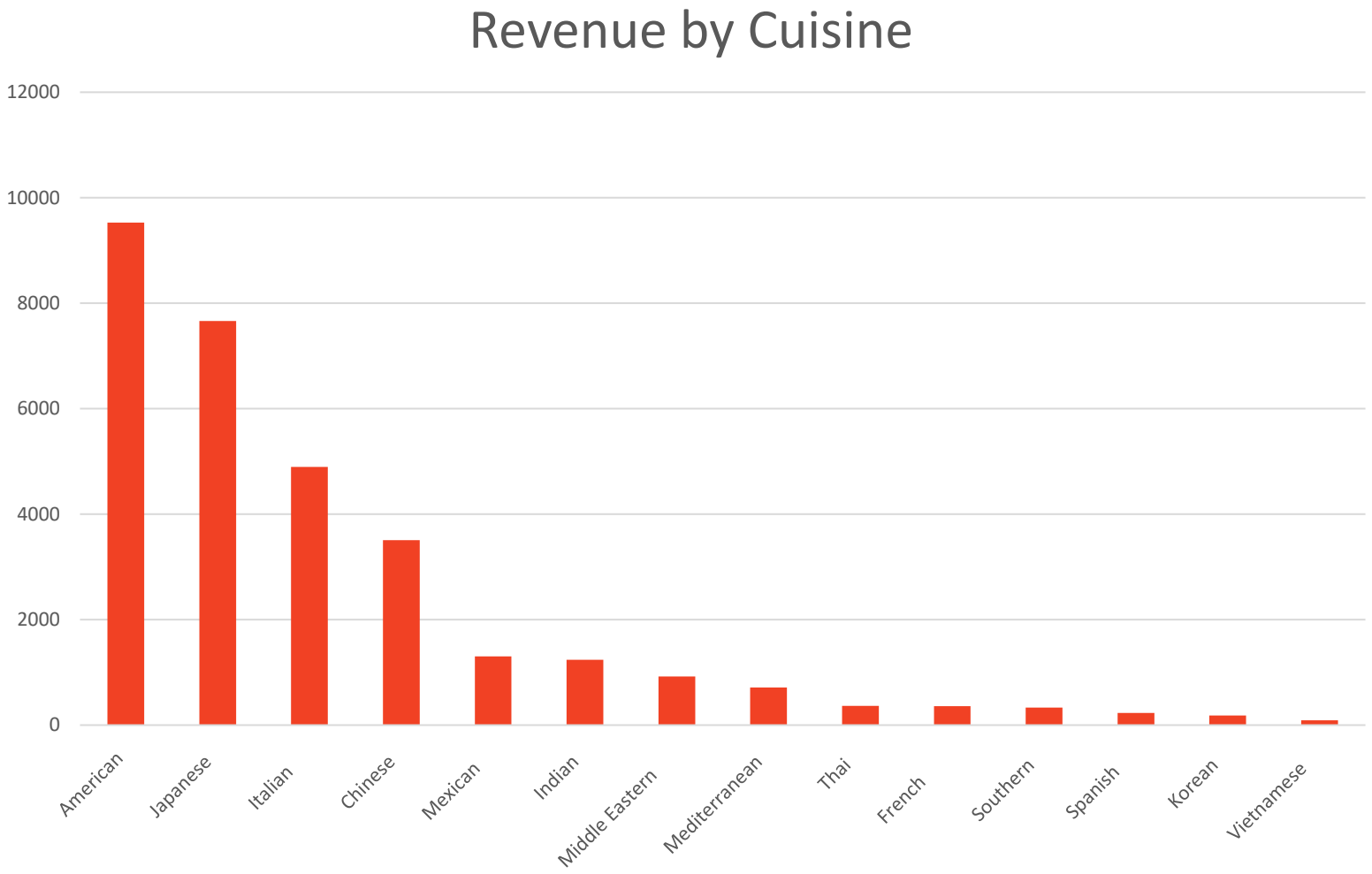
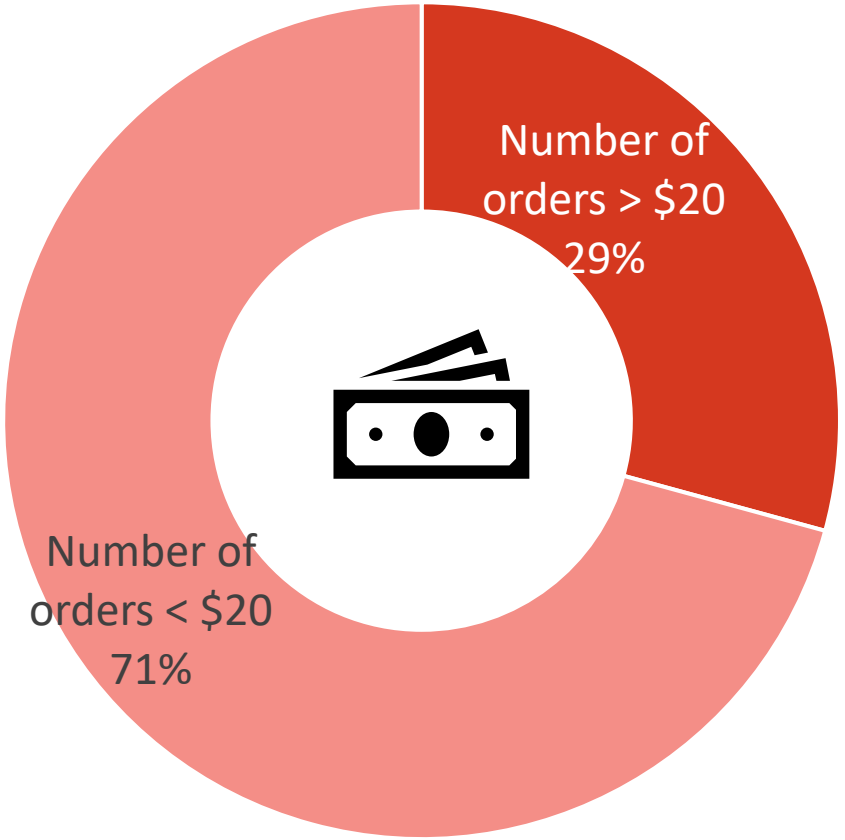
FoodHub Data Analysis – Cost



FoodHub Net Revenue

$6166.30



Number of orders > $20 = 555
Total number of orders = 1898
29% of the orders > $20

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