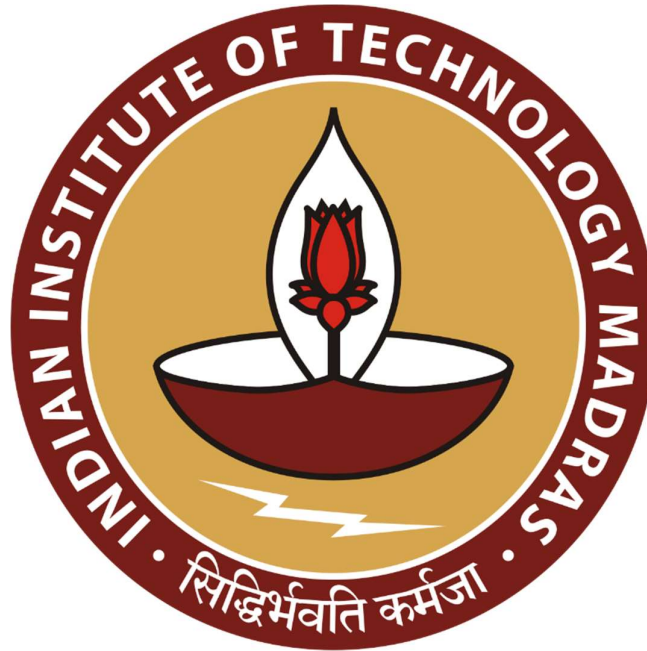


**Culinary Efficiency: Revolutionizing Restaurant Performance**  
**A Mid-Term report for the BDM capstone Project**



**Submitted By**

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## **1. Executive Summary and Title:**

This capstone project focuses on conducting an in-depth study of a B2C restaurant located in the outskirts of Avadi, Chennai. The restaurant specializes in the food segment, offering a diverse range of culinary delights to its customers.

The objective of this capstone project report is to provide a comprehensive overview of the data collection process, the type of data collected, and the analysis conducted. The owner of the restaurant has generously provided sales data for the past three months, from December 2022 to February 2023. The data collection and formatting process took approximately 2-3 weeks as the initial data was in an unstructured format and not available digitally. Invested significant efforts in properly formatting the data to ensure accurate and insightful analysis.

This report primarily focuses on quantitative analysis using Microsoft Excel, utilizing graphs and charts to enhance the understanding of the data. The report includes metadata and descriptive statistics related to the collected data, providing valuable insights into the restaurant's performance. Additionally, the report offers a detailed explanation of the analysis process employed to derive meaningful conclusions.

Through this capstone project, the aim is to provide a comprehensive and rigorous analysis of the restaurant's sales data, highlighting important trends, patterns, and factors influencing its performance. The findings and recommendations presented in this report will serve as a valuable resource for the restaurant's management in making informed decisions to enhance profitability and overall success.

## **2. Proof of originality of the Data**

### **2.1 Data Set:**

Data Set Link:

[https://docs.google.com/spreadsheets/d/1F\\_A8omuRMzE-03KRXX13ZoDwhxdIJwBB\\_8L9iKuzWwI/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1F_A8omuRMzE-03KRXX13ZoDwhxdIJwBB_8L9iKuzWwI/edit?usp=sharing)

### **2.2 Letter from Organization**

Letter Link :

<https://drive.google.com/file/d/1mXwiOMlqoqFJliZJZL0QcrksmX-sb3gY/view?usp=sharing>

### **2.3 Recorded Video**

Google Drive Video Link :

[https://drive.google.com/file/d/1aM0HTq\\_sFufS7-3cJvipZOFeon9PZvPW/view?usp=sharing](https://drive.google.com/file/d/1aM0HTq_sFufS7-3cJvipZOFeon9PZvPW/view?usp=sharing)

## 2.4 Images related to Organization



Fig 2.1 (Photo with Founder)



Fig 2.2 (Restaurant Image)



Fig 2.3 (Restaurant Image)

### 3. Metadata and Descriptive Statistics

For this capstone project, 2 sheets of excel data was provided by Mr. Jargarnath, the first sheet of data was mainly the sales data of 3 months from( DEC 2022 - FEB 2023) and the second sheet of data is mainly the Menu of the price chart.

#### I. Sales Data

**Sheet Name:** SalesData

General Info about the data: This excel sheet mainly comprise of everyday sales data from Dec 2022 to Feb 2023.

Columns of the Sheet:

1. **Date:** The date on which a specific product was sold.
2. **Item:** The item that was sold.
3. **Sales:** The quantity of items sold.
4. **Price:** The price per unit.
5. **Revenue:** The total revenue generated from selling the specified quantity of items.

Let's illustrate this with an example:

Date	Item	Sales	Price	Revenue
December 1, 2022	Tea	2	₹10.00	₹20.00

This entry in the SalesData indicates that on December 1, 2022, 2 units of Tea were sold at a price of Rs. 10 per cup. Therefore, the total revenue from selling 2 cups of tea amounts to Rs. 20.

#### II. Menu

**Sheet Name:** Menu

General Information about the Data: This Excel sheet primarily comprises the menu of Tea Traffic Shop, featuring a list of available products along with their respective prices.

Columns of the Sheet:

1. **Item:** Name of the item
2. **Price:** Price per unit of the item
3. **Veg/Non Veg:** Indicates whether the dish is vegetarian or non-vegetarian
4. **Type:** Specifies the category of the dish (e.g., drink, burger, sandwich)

Let's illustrate this with an example:

Item	Price	Veg/ Non Veg	Type
American Chilly Chicken	₹205.00	Non Veg	Spicy Dishes

The dish is called American Chilly Chicken. It is priced at Rs 205 per quantity and falls under the category of non-vegetarian dishes. Additionally, it is classified as a spicy dish.

#### **4 Detailed Explanation of Analysis Process/Method**

##### **4.1 Identifying Causes of Minimal Profit:**

To analysis the causes of Minimal Profit generation, analysis of restaurant business operations, including cost analysis and market research is being conducted to identify the underlying causes of minimal profit and develop effective strategies to address them.

##### **4.2 Optimizing Inventory Management:**

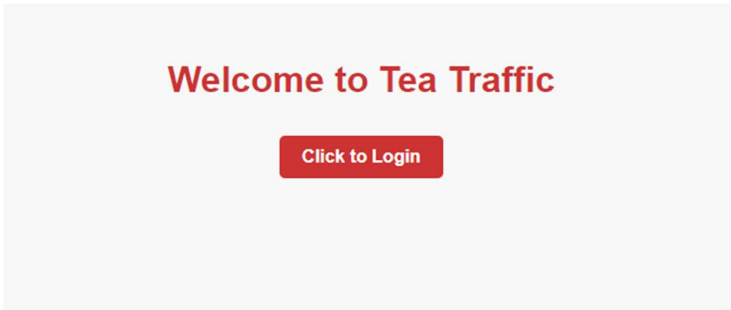
To enhance inventory management and achieve cost reduction, various methods such as forecasting, demand planning, and inventory optimization techniques are being employed. Historical sales data is being collected and analysed to accurately forecast future demand. By identifying demand patterns, seasonal variations, and trends, the restaurant is making informed decisions regarding inventory levels and purchasing quantities. Forecasting techniques such as time series analysis or regression analysis are being used to project future demand accurately. Factors influencing demand, such as promotions, holidays, and events, are being analysed in addition to forecasting. The restaurant is considering past sales records, marketing campaigns, and external factors affecting customer behaviour to align inventory levels with customer demand and avoid overstocking or stockouts.

##### **4.3 Enhancing Data Management:**

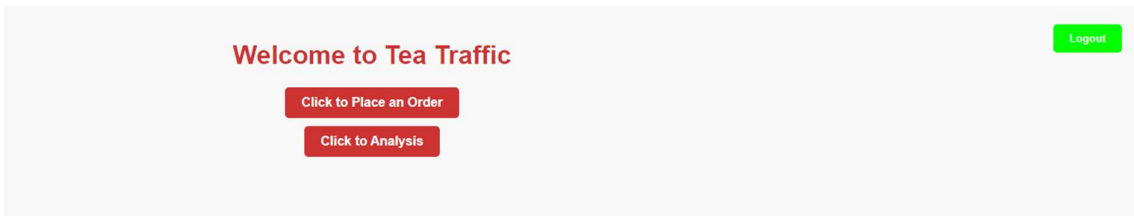
The centralized and secure data management solution application, designed for Tea Traffic, is nearing completion and is currently in the final stage of development (Testing). This application will be installed in Tea Traffic's shop to streamline and enhance their transaction processes with ease and effectiveness. The development of the application is utilizing Python (Flask) and MySQL to ensure robust functionality and seamless integration.

4.3.1 Images of the Web Application:

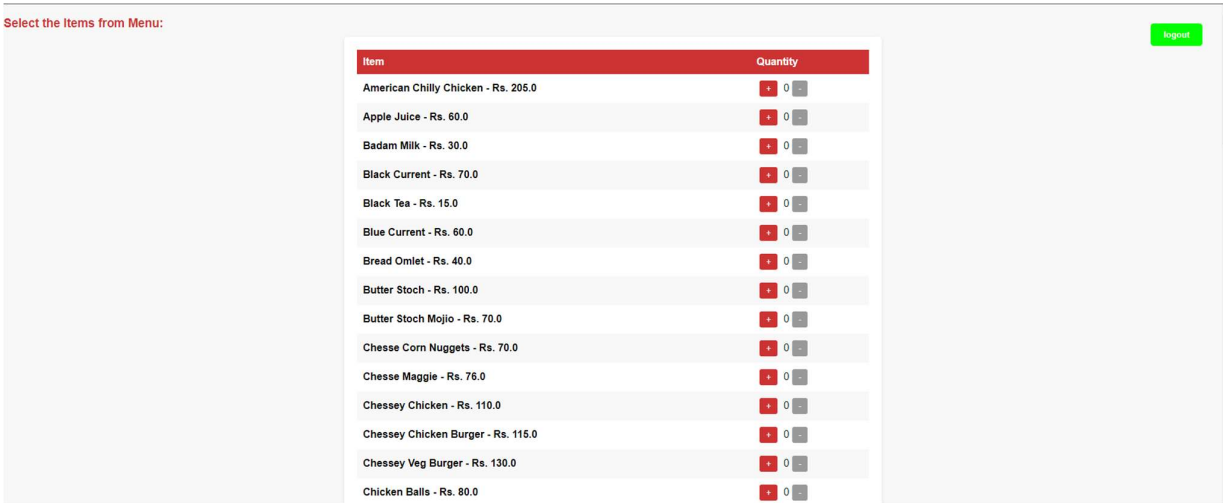
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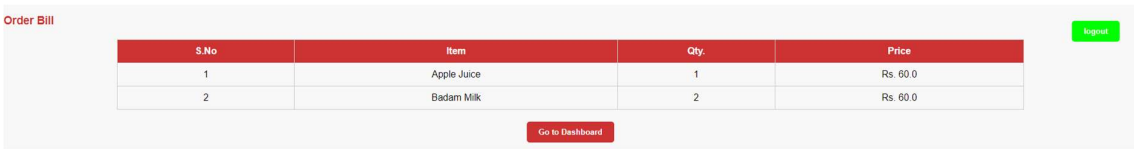
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3.



4.

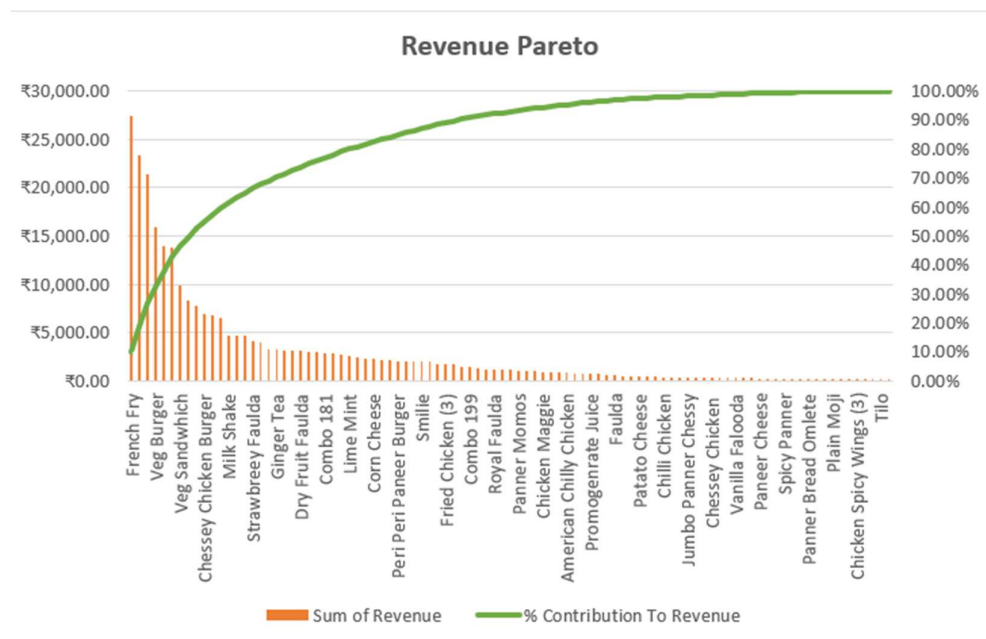




## 5 Results and Findings

### 5.1 Revenue Pareto

Based on the Revenue Pareto chart above, it is evident that approximately 29 items are responsible for contributing to 80% of the total revenue. This subset of items represents nearly 30% of the total product offering. Consequently, it is recommended that the owner focuses on enhancing the variety and availability of these high-revenue items rather than introducing new products. By emphasizing these top-performing items, the owner can capitalize on their popularity and drive further revenue growth for the business.



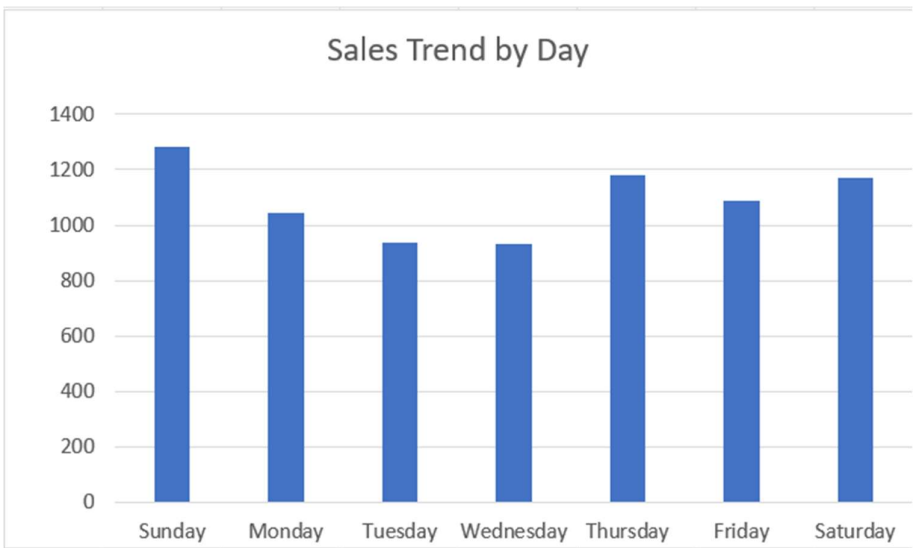
In addition, if the owner focuses on offering more varieties of the items that bring in the most revenue, they can satisfy the different preferences of their customers. This means that these items are already popular and in demand. By increasing the choices within this successful category, the owner can make customers happier and more loyal. Also, by relying on the popularity of these items, the owner can reduce the risks that come with introducing completely new products, like not knowing if people will like them or if the demand will change. So, it's a good strategy to concentrate on adding more options and improving the items that already bring in a lot of money. This can lead to positive outcomes for the business.

### 5.2 Sales Trend

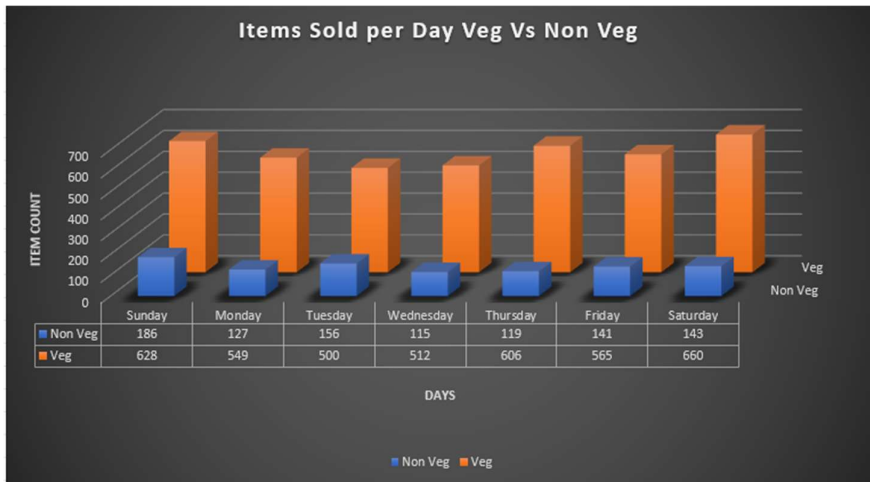
Upon analysing the sales trend of the shop throughout the week, it becomes evident that the number of sales during the weekend, particularly on Sundays, surpasses those of other days. However, during the weekdays, a noticeable spike in sales is observed on Thursdays. To bolster sales on other days of the week, strategic measures can be implemented. One approach involves introducing new offers to ensure a more even distribution of sales across all days. By implementing various enticing offers throughout the week, the shop can stimulate customer



engagement and incentivize purchases. This proactive approach to diversifying offers has the potential to optimize sales and promote consistent revenue generation.



**5.3 Items sold per Day (Veg Vs Non-Veg)**



The analysis of the bar graph indicates a substantial disparity between the sales of Veg and Non-veg Products. With Veg dishes accounting for over 60% to 70% of total sales, there is a clear dominance in customer preference. To address this, it is crucial to introduce new and enticing varieties in the Non-veg category. By expanding the menu options and incorporating innovative choices, the restaurant can attract a wider customer base and capitalize on the untapped potential of Non-veg offerings. This strategic approach aims to drive sales growth and achieve a more balanced distribution between Veg and Non-veg products.