**A Data Analysis Report**

**On**

**Freshco Hypermarket Capstone Project**

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**Submitted To**

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**Presented By**

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**Freshco Hypermarket Capstone**

**Introduction**

Freshco Hypermarket, situated in HSR, Bangalore, has established itself as a prominent supermarket in the region, catering to a wide range of customers. In response to evolving customer needs and to enhance convenience, Freshco introduced a home delivery service in the year 2021.

To ensure seamless operations and optimize customer satisfaction, the store diligently maintained a comprehensive transaction data sheet, containing detailed information at the order level.

Different levels of analysis were performed to ensure the seamless working of the hypermarket and the customer’s satisfaction. Following levels of analysis that were performed are:

* Order Level Analysis
* Completion Rate Analysis
* Customer Level Analysis
* Delivery Level Analysis

The insights of following levels of Analysis are as follows:

**ORDER LEVEL ANALYSIS**

**Introduction**

Order level analysis helps to understand every kind of information about products being ordered, their market value, availability of products, overall product order within different area and time period.

The data from Freshco Hypermarket Bangalore from January 2021 to September 2021 was provided to analysed the same.

Following points were provided from analysing the orders at Bangalore unit:

1. **Identify order distribution at slot and delivery area level**

1) Maximum number of orders are delivered to HSR layout because maximum number of pick up points are in HSR layout.

2)Maximum number of orders placed in the afternoon slot.

**2.    Identify the areas having highest increase in monthly orders (from Jan to Sep) in absolute orders.**

1) Maximum number of orders on the basis of months was found to be in September.

2) Minimum number of orders on the basis of months was found to be in January.

3) On the basis of orders from the month of January to September, top 5 areas are shortlisted:

1. HSR Layout-15657
2. ITI layout=3946

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1. Harlur- 1309
2. Bomannahali- Micolayout-551
3. Kudlu-518

4) There are areas having 1-2 orders from month of Jan to Sept like Binnipet, Brookefield, Challagatta, Cox Town, CV Raman Nagar, etc.

**3.    Calculate delivery charges as a percentage of product amount at slot and month level.**

* The delivery charges were usually high at last night i.e. 11pm to 5am.
* On the basis of months, January had maximum delivery charges and September had minimum delivery charges.
* Morning and evening slots had approximately similar delivery charges.

**4.    Calculate discount as a percentage of product amount at slot and month level.**

* Maximum discounts are given in the month of August as it is the festive season.
* Least discounts are given in the months of January to April.

**5.    Calculate discount as a percentage of product amount at drop area and slot level.**

* HSR Layout has maximum discount percentage at drop area and slot level.
* The red colour highlights shows less discount percentage.
* The yellow colour highlights shows mid-level of discount percentage.
* The green colour highlights shows high level of discount percentage.

**Conclusion:**

1. Maximum number of orders placed in the afternoon slot.
2. HSR Layout has the maximum number of orders.
3. Delivery charges are usually high for late night orders.
4. Maximum discounts are given in the month of August.

**COMPLETION LEVEL ANALYSIS**

**Introduction**

Completion rate analysis helps to identify all successful and unsuccessful orders as per time slots and delivery areas.

The data from Freshco Hypermarket Bangalore from January 2021 to September 2021 was provided to analysed the same.

Following points were provided from analysing the orders at Bangalore unit:

**6)    Identify Completion rate at slot vs day of the week (Sunday to Saturday) level. Can you spot some pattern in the data?**

* Sunday evening and Wednesday late night had 100% completion rate.
* The completion rate on Sunday was found to be on maximum level.
* On the basis of time slots, Afternoon was found to have maximum completion late.

**7)    Calculate completion rate at drop area level.**

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| * For the areas Cux town and Whitefield there aren't any successful orders and hence the completion rate is zero. |
| * Bellandur ETV has 50% completion rate. |
| * Except Bellandur ETV, Cox Town, Domlur, EGL, Indiranagar, Marathahalli, Viveknagar, Whitefield all other areas have 100% completion rate.   **8.    Completion rate at number of products ordered level. For this first you need to create a column having number of product against every order.**   * Devarachikanna Halli has 100% completion rate in the month of September. * The red colour highlights indicate low rate of completion. * The green colour highlights shows high rate of completion. |

**9.    Give you analysis on the any pattern you observe in the completion rate.**

* For the areas Cux town and Whitefield there aren't any successful orders and hence the completion rate is zero.
* HSR layout has the maximum orders and even the maximum successful orders.
* Devarachikanna Halli area has 100% completion rate at product ordered level in month of September.
* Pattandur has maximum number of successful orders.

**Conclusion:**

1. According to month, May and July has maximum successful orders with maximum numbers of orders.
2. There are 100% completion rate on Sunday evenings and Wednesday late nights.
3. For the areas Cux town and Whitefield there aren't any successful orders and hence the completion rate is zero.
4. In the month of September , an area called Devarachikkanahalli has 100% completion rate

**CUSTOMER LEVEL ANALYSIS**

**Introduction**

Customer level analysis help us to understand the customer needs and the revenue generated by customer of particular area in specific period of time.

The data from Freshco Hypermarket Bangalore from January 2021 to September 2021 was provided to analysed the same.

Following points were provided from analysing the orders at Bangalore unit:

**10.    Identify Completion rate at source level.**

* The customers came from Organic source had maximum rate of completion as compared to other sources.
* The customers from Instagram and Offline campaign had the low completion rate.

**11.    Calculate** **LTV for every customer.**

* LTV refers to the total revenue generated per customer.
* The green colour highlights indicate the higher LTV.
* The red colour highlights indicate lower LTV compared to other customers.
* Customers with user Id. GIA238253 had highest LTV of 5065, KNA1340278 with LTV of 4072.38 and PMY78943 had LTV of 3074.38.
* There are 17 customers who had 0 LTV.

**12.    Calculate aggregated LTV at customer acquisition source level. Refer to aggregated LTV example.**

* The maximum number of customers were from Organic Source.
* The aggregated LTV was found to be highest from Snapchat source and lowest for Instagram source.

**13.    Calculate aggregated LTV at acquisition month level. Refer to aggregated LTV example.**

* On the basis of acquisition month, the maximum number of customers were in month of January.
* Sum of LTV was also found highest in month of January.
* The aggregated LTV at acquisition month level was higher in month of January and lower in month of June to September.

**14.    What is the average Revenue (Product amount after discount) per order at different customer acquisition source level?**

* The average Revenue (Product amount after discount) per order at different customer acquisition source level was higher for Snapchat source and lower for Instagram source.

**15.    What is the average Revenue (Product amount after discount) per order at acquisition month level**

* The number of acquisition was high in month of January and the revenue generated was also higher in the same month.
* The number of acquisition was low in month of September so is the revenue.

**16.    Is there any pattern in order rating across slots, number of items placed, delivery charges, discount. For example, there might be an insight from the data that orders placed during late night are generally rated high. While orders placed in early morning are not rated high. OR orders having more than 5 items are generally rated high.**

* The order placement was higher in afternoon and low at late night.
* The delivery charges was higher for late night orders and lower for morning orders.
* Less discounts were offered at late night orders while higher discounts were offered in evening orders.

**Conclusion:**

1. The customers from Instagram and Offline campaign had the low completion rate.
2. Customers with user Id. GIA238253 had highest LTV of 5065, KNA1340278 with LTV of 4072.38 and PMY78943 had LTV of 3074.38. There are 17 customers who had 0 LTV.
3. The aggregated LTV was found to be highest from Snapchat source and lowest for Instagram source.
4. The aggregated LTV at acquisition month level was higher in month of January and lower in month of June to September.
5. The number of acquisition was high in month of January and the revenue generated was also higher in the same month.
6. The delivery charges was higher for late night orders and lower for morning orders. Less discounts were offered at late night orders while higher discounts were offered in evening orders.

**DELIVERY LEVEL ANALYSIS**

**Introduction**

Delivery level analysis help us to understand the patterns of delivery of orders like delivery charges, time of delivery at particular area and specific time slots.

The data from Freshco Hypermarket Bangalore from January 2021 to September 2021 was provided to analysed the same.

Following points were provided from analysing the orders at Bangalore unit:

**17.    Calculate average overall delivery time at month and delivery area level.**

* The red colour highlights of cells indicate late delivery of orders.
* The maximum late delivery of orders was found in month of May.
* Mahadevapura area had the highest late delivery of orders in month of May.

**18.    Calculate average overall delivery time at month and weekday/weekend level. You might need to create a column which will tag every date to either weekday or weekend.**

* Least time was taken to deliver orders in month of Feburary.
* May was found to be the month that had late delivery.
* Weekday’s orders were comparatively delivered faster than weekend’s order.

**19.    Calculate average overall delivery time at slot level. Refer to the definition of slot.**

* The orders of the month May was observed to be delivered late in all time slots except late night. This can be due to less traffic at night.
* It was observed that all the orders delivered late night were significantly faster as compared to other time.
* Afternoon orders were comparatively late may be due to extreme traffic.

**20.    Do you see any pattern in delivery charges with slot or delivery area.**

* The orders delivered to Bellandur ETV and Binnypet have zero delivery charges.
* Orders delivered to Brookfield has the highest delivery charges and are late night orders.
* Top 3 areas with highest delivery charges are: Brookfield, CV Raman Nagar , Frazer town and all the orders are late night orders.
* Orders delivered to ITI layout has the lowest delivery charges.

**21.    Do you see any pattern in delivery time and delivery area. If yes, then find out logical reason.**

* There are areas which had observed with late delivery like Mahadevapura, Brookefield, Vimanapura, Pattandur, CV Raman Nagar, etc.

* These late deliveries may be due to traffic issues, weather issues, delivery partner deficiency etc.
* There were comparatively fewer orders observed in morning slots from other slots.

**Conclusion:**

1. The maximum late delivery of orders was found in month of May.
2. Weekday’s orders were comparatively delivered faster than weekend’s order.
3. It was observed that all the orders delivered late night were significantly faster as compared to other time.
4. Top 3 areas with highest delivery charges are: Brookfield, CV Raman Nagar, Frazer town and all the orders are late night orders.
5. There are areas which had observed with late delivery like Mahadevapura, Brookfield, Vimanapura, Pattandur, CV Raman Nagar, etc.