**Freshco Hypermarket Capstone Report**

**Introduction**

The following report contains a detailed summary inference and a wide-ranging analysis on the Freshco Hypermarket transaction data sheet. The goal of this project was to analyse the database at various levels and extract valuable insights which answered specific questions regarding marketing, logistics and resource allocations. There are four main levels of the detailed analysis which are as follows: - Order level analysis, Completion rate analysis, Customer level analysis and Delivery level analysis.

**Order level Analysis**

* Order distribution at slot and delivery area level was observed and analyzed.

Clearly, when the top 5 delivery areas were considered then it was observed that during the afternoon slot the number of orders were high overall. Area wise the HSR layout had the highest demand when compared to others.

* The areas having highest increase in the monthly orders were identified with the HSR layout showing significant growth in the month of March.

However, since then the growth has been a little sluggish but exploded in the September month highlighted in the calculations.

* Delivery charges as a percentage of product amount at slot and month level was calculated. It was observed that the charges were higher during the night which might have been be caused due to low availability of delivery agents.
* Discount as a percentage of product amount at slot and month level was calculated. It was observed that the month of August had the highest discount.
* Discount as a percentage of product amount at drop area and slot level was also calculated.

**Completion rate Analysis**

* Completion rate of the slot with respect to the days of the week was analyzed and a pattern was found after the analysis.

It can be clearly observed that during the Weekends (Saturday and Sunday), the completion rate is higher when compared to the weekdays. This information will help the company to optimize its resource allocations as per demands during the weekends and weekdays with respect to the time slot.

* Completion rate at various drop area levels was calculated with HSR area having the highest percentage of completion rate. By considering HSR drop area as a base, we can optimize and improve the logistics as well as the delivery system/routes for the other areas with low completion rates.
* The analysis of the completion rate at number of products ordered level shows us that “lesser the number of products, the higher is the completion rate”.

This helps to understand the current customer behaviour pattern and formulate actions accordingly if there is a need of any change in it in the foreseeable future.

**Customer level Analysis**

* Completion rate at source level was found out at analyzed. This analysis gave us an overview on the customer acquisition source. The organic category covered almost 30% of the customer acquisition source. This information helps in amending marketing strategies as per the requirement.
* The Life Time Value (LTV) was calculated with respect to each and every customer, which gives us information on the profits since they started ordering.
* The aggregated LTV for the acquisition month and the acquisition source was calculated. Combination of these 2 calculations helps us in optimizing the marketing strategies pertaining to the problem of monthly churn rate as well.
* The average revenue for the acquisition month and the acquisition source was also found out which is needed for refining and upgrading the revenue generation strategies via marketing, pricing, discounts and various other factors.
* The order rating was calculated across slots, number of items placed, delivery charges, discount.

From the above charts, we can clearly understand that the order rating is highest during the afternoon slot followed by the morning slot and lowest during the late-night slot. Also, similar to the completion rate vs count of orders, the order rating and the count of products are inversely proportional to each other. But the ratio 5\* ratio very good for all the groups. Thus, this analysis emphasizes mostly on the refining the service management division.

**Delivery Analysis**

These calculations and analysis will help us understand the performance of the delivery system better and implement refined actions as per the needs of the situation.

* The average overall delivery time at month and delivery area level was calculated and highlighted.
* The average overall delivery time at month and weekday/weekend level was calculated.

It was observed that the overall delivery time is more during the weekends (Saturday and Sunday) when compared to the weekdays because of more inflow of orders. The highest overall delivery time was seen in the month of May, when the summer season is at play. A warmer climate means adequate rest and refreshment time for the delivery agents.

* The average overall delivery time at slot level was calculated. It was found that except for late night, the average overall delivery time was more or less around the same 20-25-minute mark. Due to lesser order count and less traffic the late-night deliveries are expected to be fast.
* Delivery charges with slot and delivery area was calculated. It was seen that the average delivery charges for all the areas were comparatively higher during the late-night slot vs the other slots. This happens mainly because incentive for the delivery agents become higher during the late-night slot.
* The combination of the delivery time and the delivery area table was created to check for any available patterns. It was found that for near about 8-10 delivery areas, the maximum, minimum and average delivery time was same. The main reason for this anomaly is the single order count.