



A Data Analysis Report On

“FRESHCO HYPERMARKET SALES”

As a fulfilment of

CAPSTONE PROJECT

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ABSTRACT

Introduction:

The following analysis presents an in-depth exploration of Freshco Hypermarket's sales data, aiming to derive valuable insights into various aspects of its business operations. This analysis, conducted as part of the capstone project at Skillovilla Institute, delves into the Order Level, Completion Rate, Delivery Level, and Customer Level Analysis to provide comprehensive insights into Freshco's sales performance.

Purpose of the Analysis:

This analysis is aimed at uncovering patterns, trends, and correlations within the sales data of Freshco Hypermarket. By examining different levels of data, we seek to understand customer behaviour, optimize operational efficiency, and provide actionable recommendations for enhancing business strategies.

Scope of the Analysis:

The scope of this analysis encompasses a detailed investigation of Freshco's sales data across different dimensions. It involves analysing orders, completion rates, delivery metrics, and customer behaviours to gain a holistic view of the hypermarket's performance.

Methodology Overview:

The analysis primarily utilizes Excel as the primary tool for data processing and analysis. Data collection involved gathering sales information, cleaning, and preparing the dataset for analysis, followed by exploratory data analysis techniques like Pivot tables, charts, conditional formatting etc., within Excel.

Expected Outcomes:

Through this analysis, we aim to identify key insights and trends that can contribute to optimizing operations and strategies at Freshco Hypermarket. These findings are anticipated to provide actionable recommendations to improve business performance and customer satisfaction.

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GLOSSARY OF TERMS

Completion rate	This refers to the rate at which orders are completed. (Order successfully delivered / Total order placed).
Customer Lifetime value	It refers to the total revenue generated per customer.
Delivery Area	It refers to the designated drop-off location where a product or package is intended to be delivered.
Slot definition	<p>A time slot is a specific interval when a customer chooses to place an order from a specific store or location.</p> <p>Morning - Orders placed between 5am to 12pm Afternoon - Orders placed between 12pm to 5 pm Evening - Orders placed between 5pm to 8pm Night - Orders placed between 8pm to 11pm Late Night - Orders placed between 11pm to 5am</p>
Customer acquisition source	It is the source from which a customer got acquired to the platform.
Overall delivery time	It refers as the time difference between the order placed time and the completion time of the delivery process. It measures the total elapsed time required for the entire delivery process (Order time – completed delivery time).
Order to Arrival	Order time to Partner Store reach.
Arrival to pickup	Partner Store Reach Time to Partner Start for Delivery Time.
Pickup to Delivery	Partner Start for Delivery Time to Completed/Cancelled Timestamp.

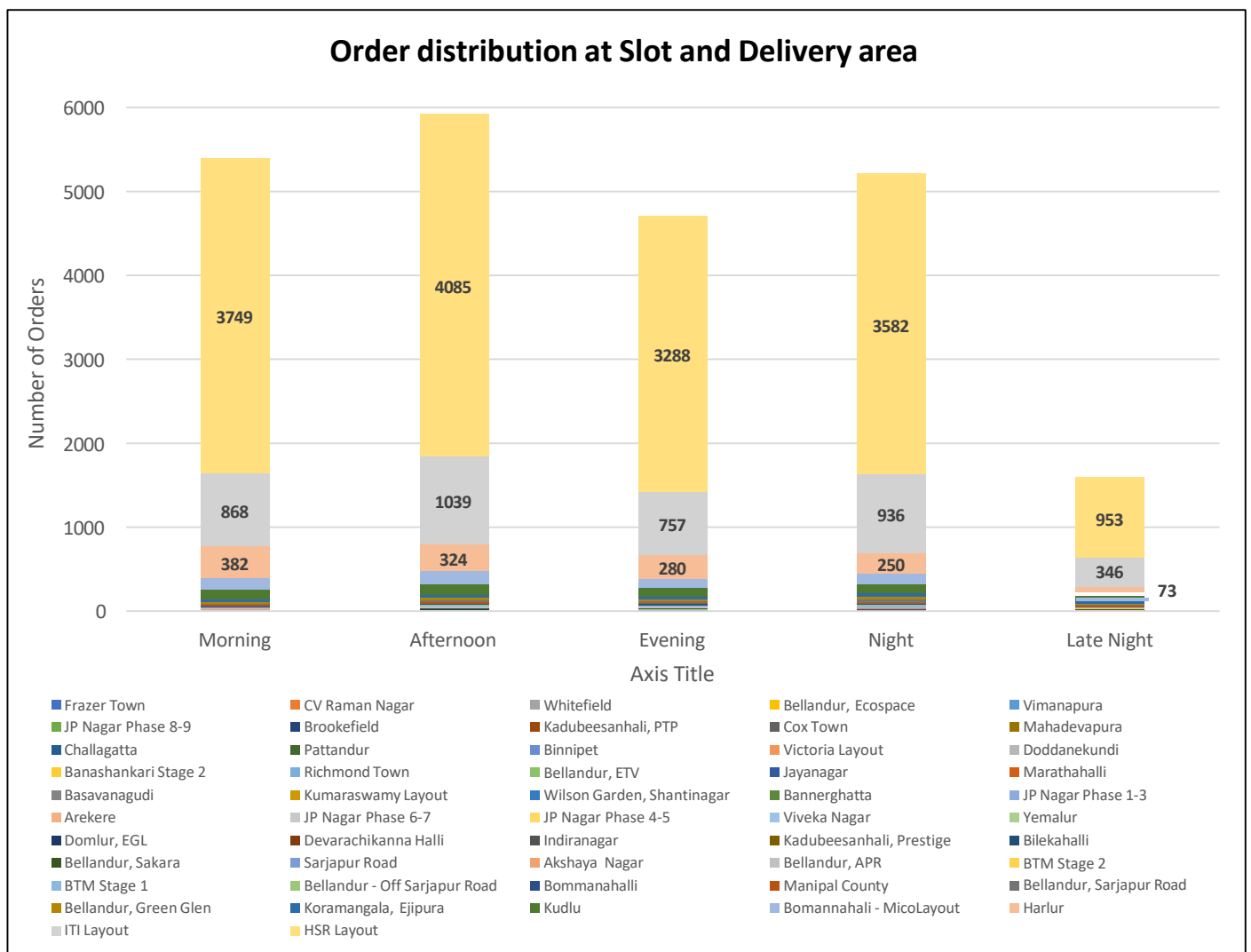
ORDER LEVEL ANALYSIS

Order Level Analysis involves the examination and evaluation of order distribution within a dataset. It focuses on analysing various attributes associated with each order, such as delivery area, delivery charges, discounts and trends over month, slot, and day of week. This analysis helps in understanding the characteristics and patterns of the transactions, aiding in decision-making related to inventory management, area preferences, and sales strategies.

Let us perform Order level analysis by comparing few business metrics.

Order distribution at slot and delivery area level:

Order distribution at slot and delivery area level refers to the analysis of the allocation and geographical distribution of orders among specific time slots or regions for efficient logistical planning and optimized delivery operations.



- The data unveiled intriguing insights into order distribution across various time slots and delivery areas.

Slots	Morning	Afternoon	Evening	Night	Late Night
% Contribution	24%	26%	21%	23%	7%

The above table delineates the contribution percentages of orders across distinct time slots, highlighting that the Afternoon slot holds the highest percentage contribution of **26%**, followed closely by the Morning, Night, and Evening slots with **24%**, **23%** and **21%**, respectively, while the Late-Night slot shows the lowest contribution at **7%**.

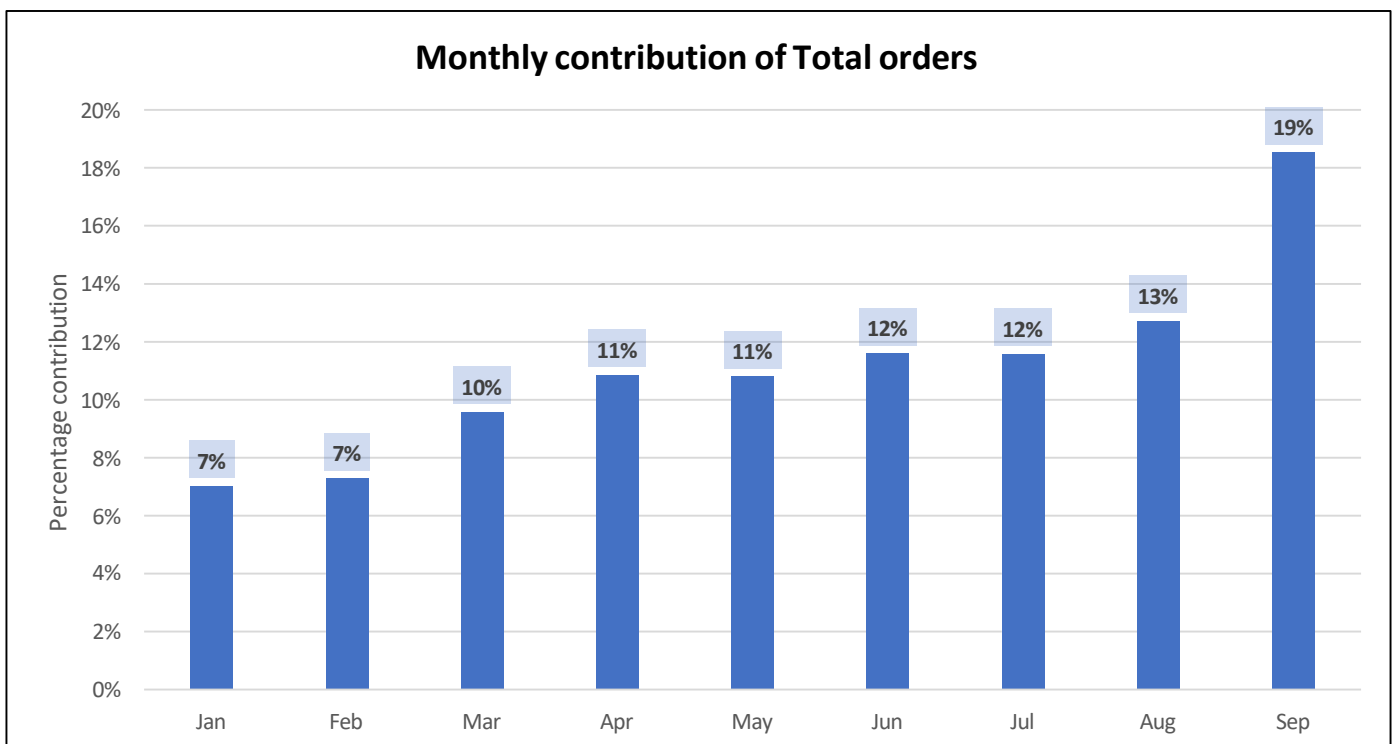
- It became apparent that certain regions, such as **HSR Layout** (69%), **ITI Layout** (17%) and **Harlur** (6%) experienced heightened demand across all the time slots and around **92%** of the total orders were delivered to these three areas.
- The analysis also showcased that **50+ orders each** were delivered across all the time slots in regions like Bommanahalli, Manipal County, Belladur Sarjapur Road, Bellandur Green Glen, Koramangala Ejipura and Kudlu, emphasizing that effective organization of marketing campaigns within these regions may result in a potential surge in future order volumes.
- Meanwhile, **one order each** across all the time slots were delivered to areas like Fraser Town, CV Raman Nagar, Whitefield, Bellandur Ecospace, Vimanapura, JP Nagar 8-9 phase, Brookefield, Kadubeesanhali, Cox Town, Mahadevapura, Challagatta, Pattandur, Binnipet and Victoria Layout, suggesting a need for targeted promotional campaigns to stimulate engagement.

Areas having highest increase in monthly orders.

This analysis aims to identify the specific regions or areas that experienced the greatest numerical growth in order volumes from January to September.

Order Drop Geo	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Increase in orders
HSR Layout	1072	▲ 1186	▲ 1573	▲ 1794	▼ 1768	▲ 1855	▲ 1882	▲ 1921	▲ 2606	▲ 1534
ITI Layout	264	▼ 253	▲ 351	▲ 374	▼ 354	▲ 438	▲ 467	▲ 528	▲ 917	▲ 53
Harlur	53	▲ 70	▲ 88	▼ 86	▼ 68	▼ 67	▲ 84	▲ 254	▲ 539	▲ 486
Bomannahali - MicoLayout	90	▼ 45	▲ 49	▲ 58	▼ 50	▲ 65	▲ 65	▲ 79	▼ 50	▼ -40
Kudlu	55	▼ 46	▲ 51	▼ 49	▲ 78	▲ 100	▼ 57	▼ 54	▼ 28	▼ -27
Koramangala, Ejipura	5	▲ 15	▼ 11	▲ 35	▼ 33	▼ 21	▼ 15	▼ 8	▲ 17	▲ 12
Bellandur, Green Glen	8	▲ 8	▲ 10	▲ 16	▲ 16	▲ 22	▲ 22	▼ 10	▲ 22	▲ 14
Bellandur, Sarjapur Road	11	▼ 5	▲ 8	▲ 15	▼ 9	▲ 19	▼ 14	▼ 6	▲ 11	▲ 0
Manipal County	12	▼ 3	▲ 5	▲ 8	▼ 7	▲ 23	▼ 7	▲ 10	▼ 5	▼ -7
Bommanahalli	7	▲ 7	▼ 5	▲ 5	▲ 13	▼ 6	▼ 3	▲ 4	▼ 2	▼ -5
Bellandur - Off Sarjapur Road	4	▼ 1	▲ 4	▲ 9	▼ 8	▼ 6	▼ 2	▲ 7	▼ 3	▼ -1
BTM Stage 1	3	▲ 4	▲ 6	▼ 4	▲ 9	▼ 2	▼ 1	▲ 3	▲ 3	▲ 0
BTM Stage 2	4	▲ 4	▼ 3	▲ 3	▲ 6	▼ 1	▲ 3	▲ 3	▲ 5	▲ 1
Bellandur, APR	3	▲ 9	▼ 6	▼ 2	▼ 1	▲ 2	▼ 1	▲ 4	▼ 1	▼ -2
Akshaya Nagar	0	▲ 0	▲ 3	▲ 5	▼ 4	▲ 6	▼ 0	▲ 1	▲ 2	▲ 2
Sarjapur Road	1	▼ 0	▲ 0	▲ 1	▲ 6	▼ 4	▲ 4	▼ 0	▲ 4	▲ 3
Bilekahalli	2	▼ 0	▲ 1	▼ 0	▲ 2	▼ 0	▲ 2	▼ 1	▲ 3	▲ 1
Bellandur, Sakara	0	▲ 0	▲ 1	▲ 1	▲ 3	▼ 1	▲ 1	▲ 2	▲ 2	▲ 2
Kadubeesanahali, Prestige	0	▲ 1	▲ 2	▼ 0	▲ 2	▼ 0	▲ 3	▼ 0	▲ 1	▲ 1
Domlur, EGL	2	▼ 0	▲ 1	▲ 2	▲ 2	▼ 0	▲ 0	▲ 0	▲ 1	▼ -1
Devarachikanna Halli	1	▲ 2	▼ 1	▲ 2	▼ 0	▲ 1	▼ 0	▲ 0	▲ 1	▲ 0
Indiranagar	0	▲ 0	▲ 0	▲ 3	▼ 2	▼ 1	▲ 2	▼ 0	▲ 0	▲ 0
JP Nagar Phase 4-5	1	▲ 1	▼ 0	▲ 1	▲ 3	▼ 0	▲ 0	▲ 1	▼ 0	▼ -1
Viveka Nagar	0	▲ 0	▲ 0	▲ 1	▲ 3	▼ 1	▲ 2	▼ 0	▲ 0	▲ 0
Yemalur	0	▲ 1	▼ 0	▲ 1	▼ 0	▲ 1	▲ 1	▲ 2	▼ 1	▲ 1
Arekere	2	▼ 0	▲ 0	▲ 1	▲ 1	▲ 1	▼ 0	▲ 0	▲ 1	▼ -1
JP Nagar Phase 6-7	0	▲ 1	▲ 1	▼ 0	▲ 3	▼ 1	▼ 0	▲ 0	▲ 0	▲ 0
Bannerghatta	2	▼ 0	▲ 1	▼ 0	▲ 1	▼ 0	▲ 0	▲ 1	▼ 0	▼ -2
JP Nagar Phase 1-3	1	▼ 0	▲ 1	▲ 1	▲ 1	▼ 0	▲ 0	▲ 1	▼ 0	▼ -1
Kumaraswamy Layout	0	▲ 1	▼ 0	▲ 0	▲ 2	▼ 0	▲ 1	▼ 0	▲ 0	▲ 0
Wilson Garden, Shantinagar	0	▲ 0	▲ 1	▼ 0	▲ 1	▼ 0	▲ 0	▲ 0	▲ 2	▲ 2
Jayanagar	1	▼ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 1	▲ 1	▼ 0	▼ -1
Marathahalli	1	▼ 0	▲ 0	▲ 0	▲ 1	▼ 0	▲ 0	▲ 0	▲ 1	▲ 0
Basavanagudi	0	▲ 0	▲ 0	▲ 0	▲ 3	▼ 0	▲ 0	▲ 0	▲ 0	▲ 0
Doddanekundi	0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 1	▲ 1	▼ 0	▲ 0
Banashankari Stage 2	0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 1	▲ 1	▼ 0	▲ 0	▲ 0
Richmond Town	0	▲ 0	▲ 0	▲ 0	▲ 2	▼ 0	▲ 0	▲ 0	▲ 0	▲ 0
Bellandur, ETV	0	▲ 0	▲ 1	▼ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 1	▲ 1
Frazer Town	0	▲ 0	▲ 1	▼ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0
CV Raman Nagar	0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 1	▼ 0	▲ 0	▲ 0	▲ 0
Whitefield	0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 1	▲ 1
Bellandur, Ecospace	1	▼ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▼ -1
Vimanapura	0	▲ 0	▲ 0	▲ 0	▲ 1	▼ 0	▲ 0	▲ 0	▲ 0	▲ 0
JP Nagar Phase 8-9	0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 1	▼ 0	▲ 0	▲ 0	▲ 0
Brookefield	0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 1	▼ 0	▲ 0	▲ 0
Kadubeesanahali, PTP	0	▲ 0	▲ 0	▲ 0	▲ 1	▼ 0	▲ 0	▲ 0	▲ 0	▲ 0
Cox Town	0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 1	▼ 0	▲ 0	▲ 0
Mahadevapura	0	▲ 0	▲ 0	▲ 0	▲ 1	▼ 0	▲ 0	▲ 0	▲ 0	▲ 0
Challagatta	0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 1	▼ 0	▲ 0
Pattandur	0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 1	▼ 0	▲ 0
Binnipet	0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 1	▼ 0	▲ 0	▲ 0
Victoria Layout	0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 0	▲ 1	▲ 1
Grand Total	1606	1663	2185	2477	2465	2647	2645	2904	4231	2625

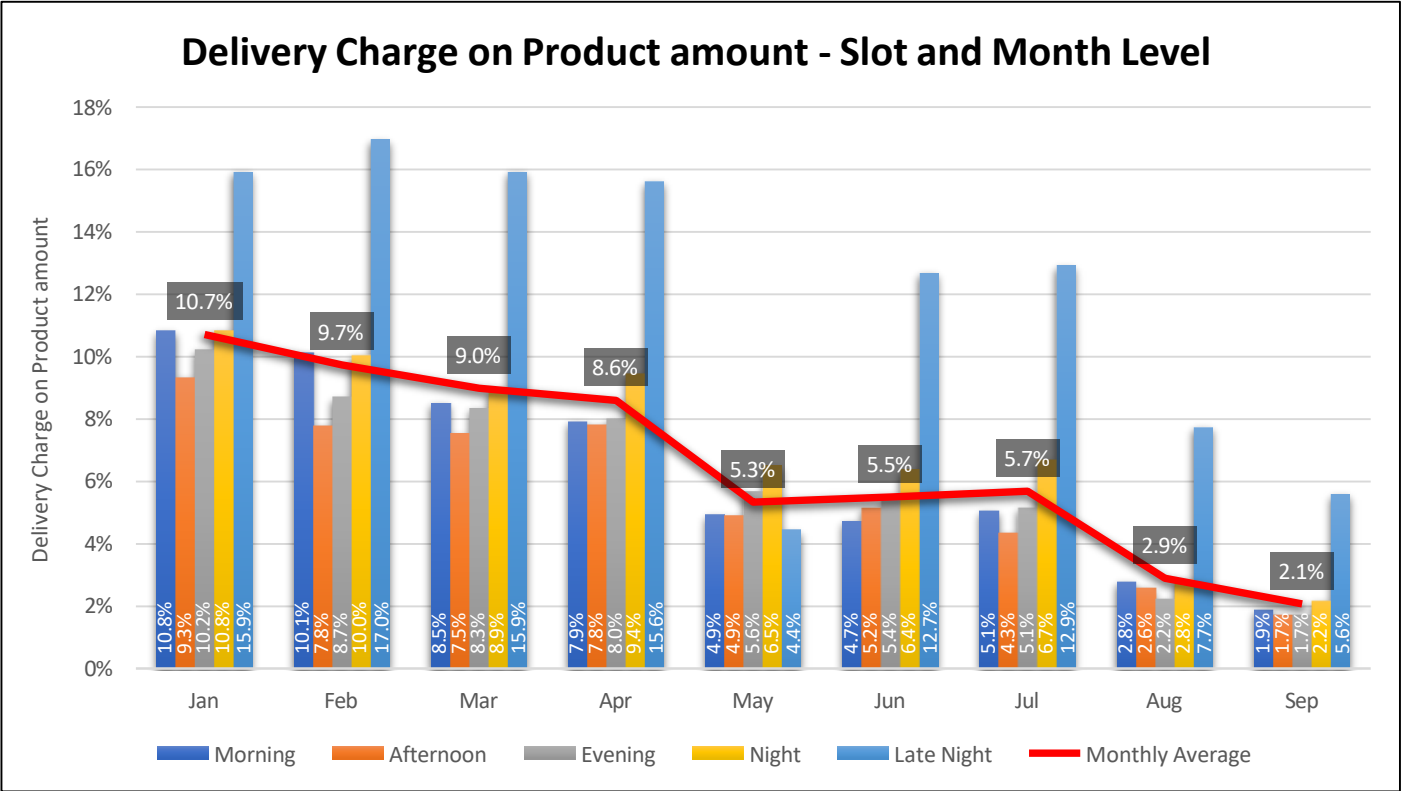
- HSR Layout has consistently shown a substantial increase in monthly orders from January (1072 orders) to September (2606 orders), marking the highest absolute increase among the listed areas.
- ITI Layout also demonstrates a noticeable rise in monthly orders, steadily increasing from 264 orders in January to 917 orders in September, showcasing consistent growth.
- Harlur presents a significant surge in orders, especially between August (254 orders) and September (539 orders), showing a rapid increase.
- Several areas like Bomannahali - MicoLayout, Kudlu, and Koramangala, Ejipura exhibit fluctuations in their monthly order volumes, but the changes are relatively moderate compared to other areas.
- In contrast, various locations like Jayanagar, Marathahalli, Basavanagudi, and Richmond Town showcase minimal changes in monthly orders over the given period.



- There is a progressive increase in the contribution percentage from January to September, with September showing the highest contribution of 19%.
- March, April, and May demonstrate steady percentages, each accounting for around 10-11% of the total contributions.
- The initial months of January and February hold consistent contributions of 7% each, gradually increasing until September, showcasing a significant spike in September's contribution at 19%.

Delivery charges as a percentage of product amount at Slot and Month level.

This analysis refers to calculating the proportion of delivery charges concerning the product amount across different time slots and months.



- January shows relatively higher percentage of Delivery charges upon product amount across most slots, and has an average of **10.7%** across all slots, whereas September shows the lowest percentages with an average of **2.1%** across all slots, depicting reduced delivery charges relative to product amounts in the earlier months.
- May month average had abrupt fall of **3.3%** in the rate, and then it again picked up in June and July, due to a notable increase in delivery charges upon product amount for the late night orders, reaching **12.7%** and **12.9%**, respectively.
- August and September showcase significant drops in these percentages, particularly in Late Night, with percentages of **7.7%** and **5.6%**, respectively, implying lower delivery charges concerning product amounts in the late months of the year.

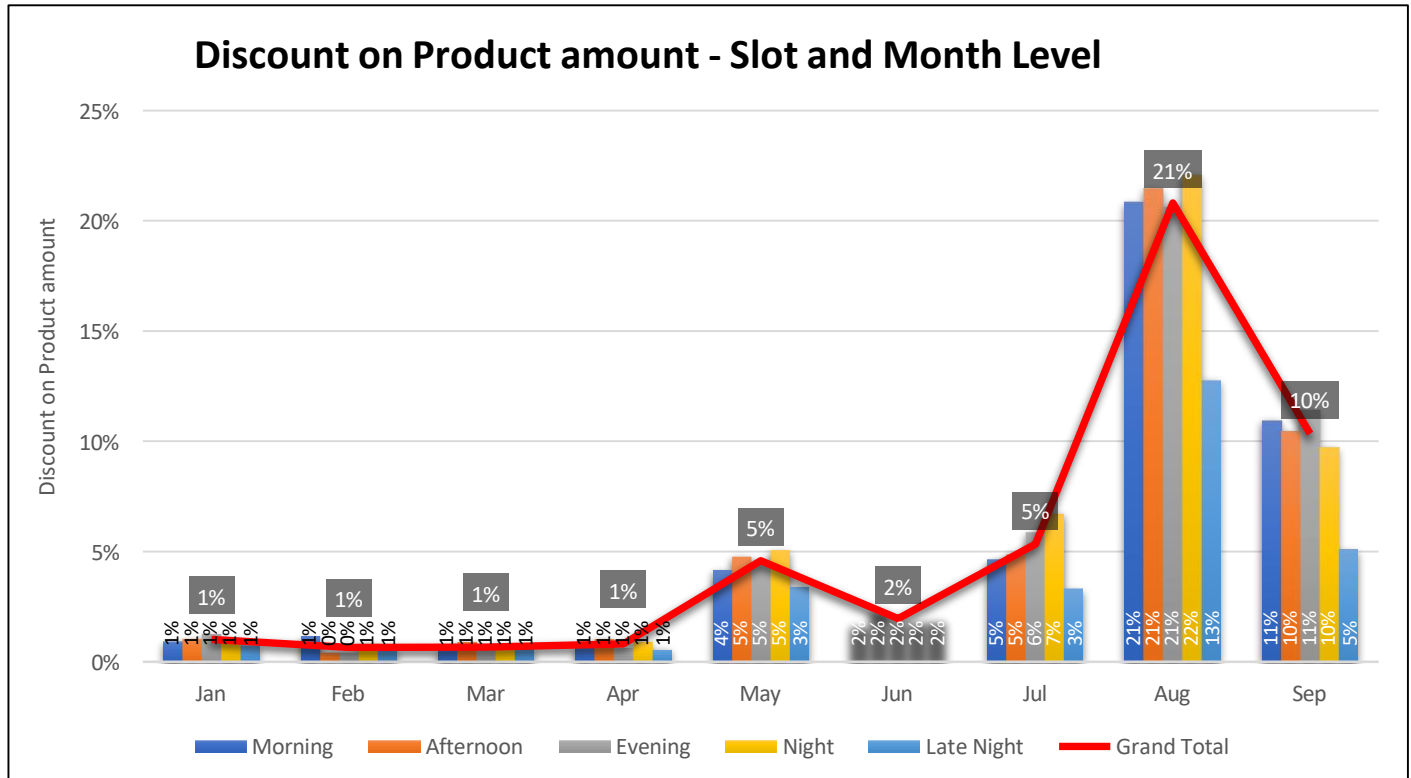
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Months	Morning	Afternoon	Evening	Night	Late Night
Average	5.3%	5.1%	5.4%	6.4%	12.3%

- Late Night consistently reflects the highest proportion of delivery charges upon the product amount, with a maximum of **17%** in the month of February and an average of **12.3%** across the months.

Discount as a percentage of product amount at Slot and Month level.

This analysis refers to calculating the proportion of Discount concerning the product amount across different time slots and months.

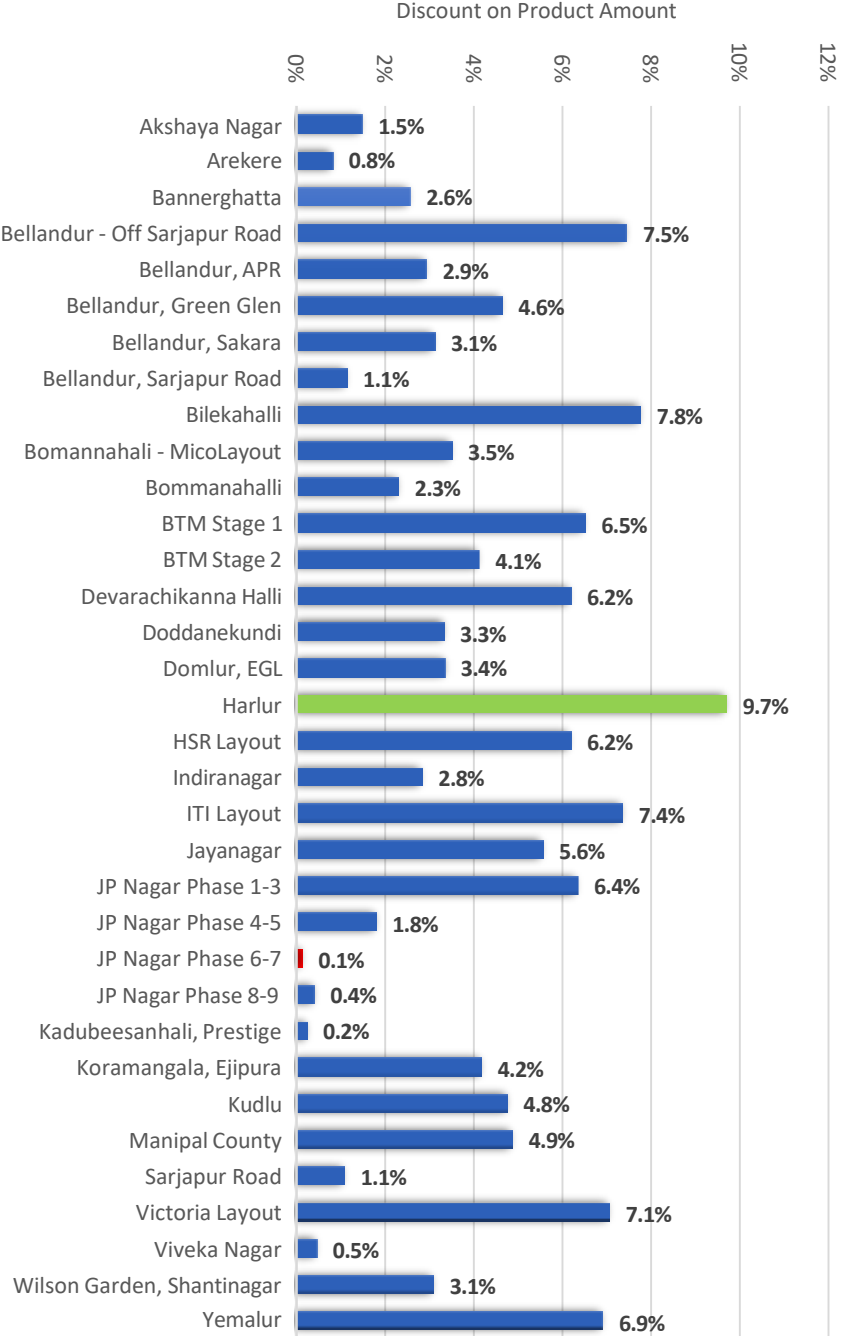


- The late-night slot consistently shows the highest delivery charges as a percentage of the product amount across all months, ranging from 12.3% to 17.0%.
- Morning and afternoon slots maintain relatively moderate percentages, ranging between 1.9% and 10.8% throughout the months.
- There is a consistent decrease in delivery charges as a percentage of the product amount from earlier times (morning and afternoon) to later times (evening, night, and late night) across the months.
- The months of May, June, July, and August show a reduction in delivery charges as a percentage compared to the preceding months, potentially influenced by seasonal trends or promotional activities.
- Generally, there's a trend of lower delivery charges as a percentage of the product amount in the later months (August and September) compared to the earlier months (January to April).

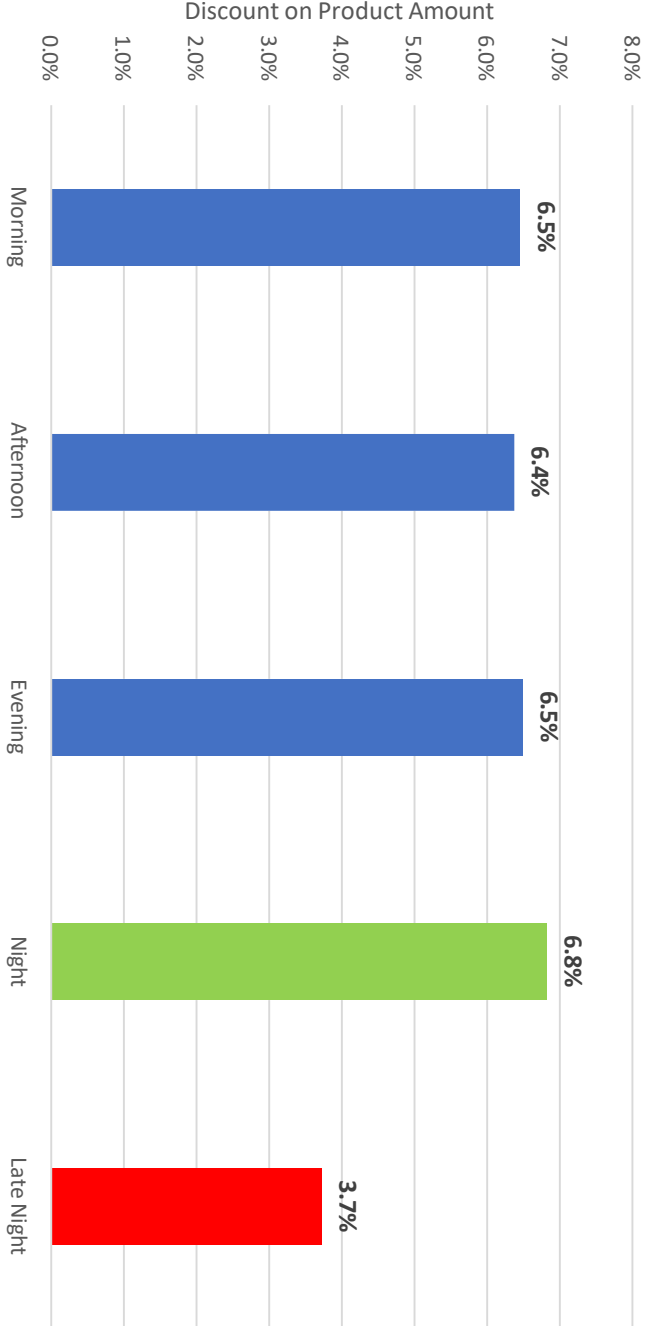
Discount as a percentage of product amount at Drop area and Slot level.

This analysis refers to calculating the proportion of Discount concerning the product amount across different time slots and months.

Discount on Product amount - Drop area Level



Discount on Product amount - Slot level



Order Drop Geo	Morning	Afternoon	Evening	Night	Late Night	Grand Total
Akshaya Nagar	0.2%	0.3%	0.3%	10.5%	0.0%	1.5%
Arekere		0.0%	1.7%	3.1%	0.0%	0.8%
Banashankari Stage 2			0.0%	0.0%		0.0%
Bannerghatta	0.0%		2.0%	7.7%		2.6%
Basavanagudi			0.0%	0.0%		0.0%
Bellandur - Off Sarjapur Road	1.8%	5.0%	4.2%	14.2%	0.0%	7.5%
Bellandur, APR	1.1%	4.1%	3.0%	6.7%		2.9%
Bellandur, Ecospace					0.0%	0.0%
Bellandur, ETV				0.0%		0.0%
Bellandur, Green Glen	2.2%	4.7%	5.8%	6.1%	4.2%	4.6%
Bellandur, Sakara		1.5%	0.0%	0.0%	43.2%	3.1%
Bellandur, Sarjapur Road	2.3%	0.7%	1.7%	1.0%	1.2%	1.1%
Bilekahalli	13.2%	13.3%	1.7%	29.7%	10.0%	7.8%
Binnipet	0.0%					0.0%
Bomannahali - MicoLayout	3.7%	2.1%	2.7%	6.8%	2.1%	3.5%
Bommanahalli	1.2%	1.9%	2.9%	3.3%	4.4%	2.3%
Brookefield					0.0%	0.0%
BTM Stage 1	8.2%	14.7%	0.0%	0.7%	0.0%	6.5%
BTM Stage 2	4.9%	0.5%	8.8%	1.8%	0.0%	4.1%
Challagatta					0.0%	0.0%
Cox Town						
CV Raman Nagar					0.0%	0.0%
Devarachikanna Halli		1.2%	0.0%	12.4%	0.0%	6.2%
Doddanekundi				10.0%	0.0%	3.3%
Domlur, EGL	1.3%	0.0%			17.1%	3.4%
Frazer Town					0.0%	0.0%
Harlur	10.2%	10.3%	9.2%	9.9%	3.7%	9.7%
HSR Layout	6.0%	6.2%	6.5%	6.5%	4.0%	6.2%
Indiranagar	0.0%	1.6%		6.8%	0.0%	2.8%
ITI Layout	8.2%	7.2%	7.1%	8.0%	4.1%	7.4%
Jayanagar	0.0%	0.0%	35.6%			5.6%
JP Nagar Phase 1-3	0.0%		16.7%	0.0%	0.0%	6.4%
JP Nagar Phase 4-5	0.3%	0.0%	0.0%	0.0%	20.7%	1.8%
JP Nagar Phase 6-7	0.2%	0.0%			0.0%	0.1%
JP Nagar Phase 8-9			0.4%			0.4%
Kadubeesanahali, Prestige		0.0%		1.9%	0.0%	0.2%
Kadubeesanahali, PTP				0.0%		0.0%
Koramangala, Ejipura	1.3%	6.9%	5.7%	3.0%	2.1%	4.2%
Kudlu	4.9%	6.4%	3.7%	4.7%	1.4%	4.8%
Kumaraswamy Layout	0.0%	0.0%	0.0%	0.0%		0.0%
Mahadevapura	0.0%					0.0%
Manipal County	4.6%	3.5%	3.3%	12.4%	5.9%	4.9%
Marathahalli			0.0%	0.0%		0.0%
Pattandur		0.0%				0.0%
Richmond Town		0.0%				0.0%
Sarjapur Road		0.1%	0.0%	2.3%	0.0%	1.1%
Victoria Layout				7.1%		7.1%
Vimanapura		0.0%				0.0%
Viveka Nagar		0.6%	0.3%			0.5%
Whitefield						
Wilson Garden, Shantinagar			2.2%	3.8%		3.1%
Yemalur	12.2%	0.0%	9.9%	0.0%		6.9%
Grand Total	6.5%	6.4%	6.5%	6.8%	3.7%	

- Late night deliveries exhibit the highest discount percentages across various drop areas and slots, reaching up to 43.2% in certain locations like Bellandur, Sakara.
- Morning and afternoon slots typically show lower discount percentages, indicating a trend of fewer discounts offered during earlier times of the day.
- The discount percentage varies significantly between drop areas and slots, suggesting that discounts are strategically applied based on geographic locations and delivery time slots.
- Certain areas like Jayanagar, Whitefield, and Basavanagudi show consistently low to no discounts across all slots, potentially indicating specific market strategies or customer behavior patterns.
- Drop areas like Bilekahalli, Yemalur, and Devarachikanna Halli exhibit relatively higher discount percentages across various time slots, possibly due to targeted marketing or competitive pricing strategies in those areas.

COMPLETION RATE ANALYSIS

Completion Rate Analysis assesses the ratio of successfully completed orders to the total number of orders received or initiated within a specific period. It involves analysing the fulfilment process, including factors contributing to completed orders as well as those leading to cancellations or unfulfilled transactions. Understanding completion rates is crucial in optimizing operational efficiency, identifying bottlenecks, and enhancing customer satisfaction by minimizing order cancellations or delays.

Let us perform Completion rate analysis by comparing few business metrics.

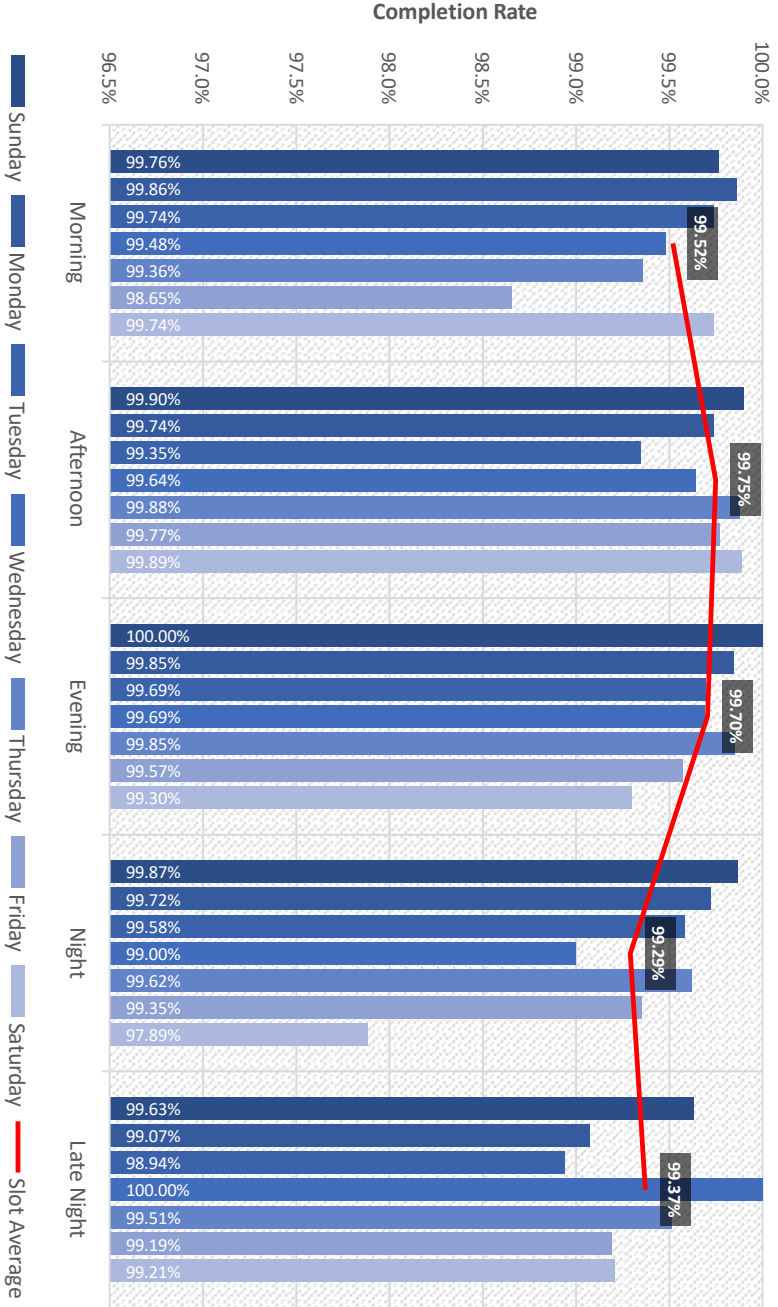
Completion rate at slot vs day of the week level:

This analysis assesses the completion rate variation across different time slots and days of the week to identify patterns influencing order fulfilment efficiency.

Comp. Rate Slots	Day							Grand Total
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
Morning	99.76%	99.86%	99.74%	99.48%	99.36%	98.65%	99.74%	99.52%
Afternoon	99.90%	99.74%	99.35%	99.64%	99.88%	99.77%	99.89%	99.75%
Evening	100.00%	99.85%	99.69%	99.69%	99.85%	99.57%	99.30%	99.70%
Night	99.87%	99.72%	99.58%	99.00%	99.62%	99.35%	97.89%	99.29%
Late Night	99.63%	99.07%	98.94%	100.00%	99.51%	99.19%	99.21%	99.37%
Grand Total	99.86%	99.74%	99.55%	99.49%	99.66%	99.34%	99.24%	99.55%

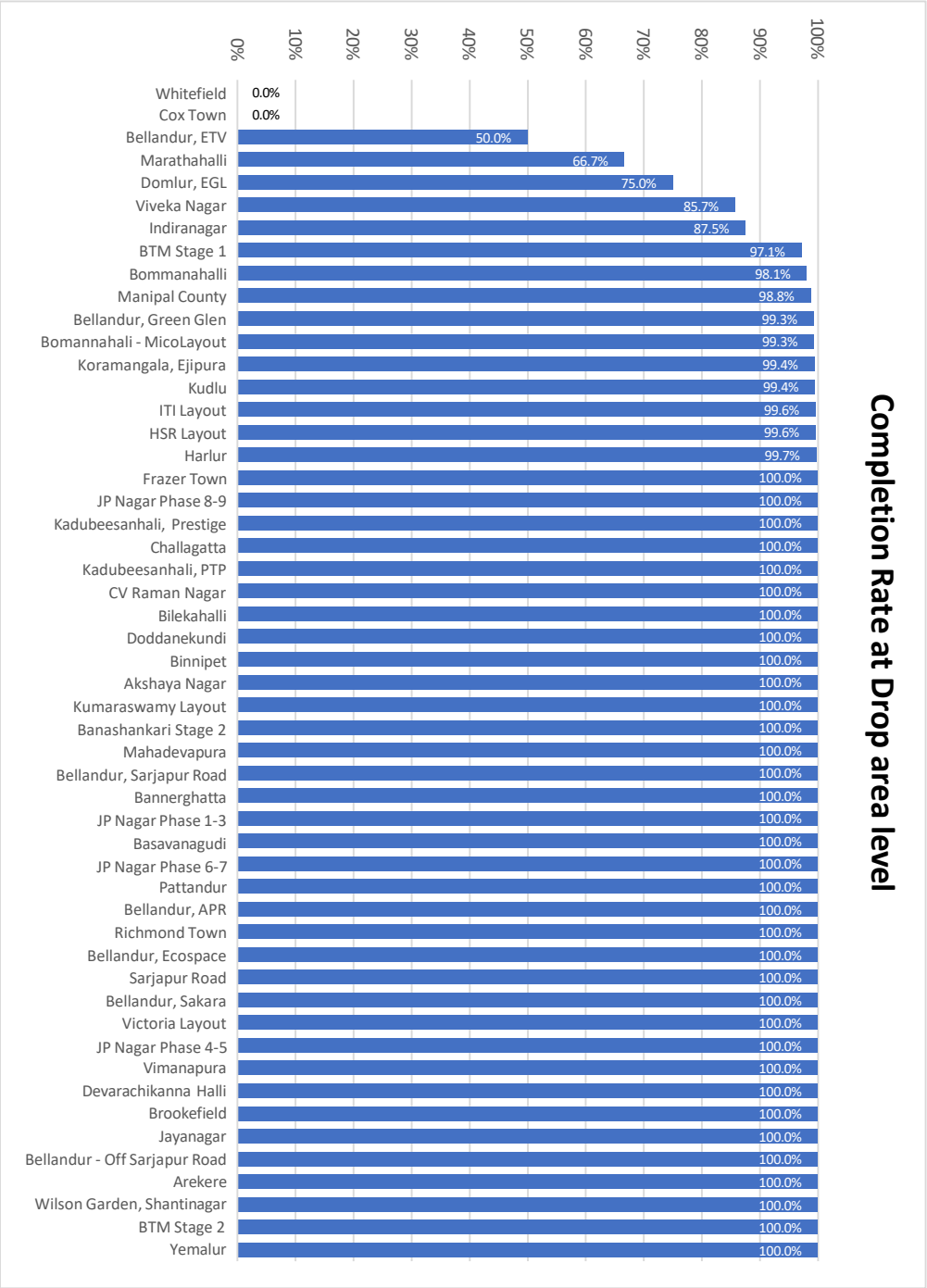
- Sunday shows consistently high completion rates across all time slots, particularly in the Evening slot at 100%.
- Wednesday exhibits a slight dip in completion rates, notably in the Night slot at 99.00%.
- Late Night slots display varying completion rates, with Wednesday showing the highest at 100.00% and Friday registering the lowest at 97.89%.
- Across the week, Thursday and Friday indicate slightly lower completion rates in the Morning and Late-Night slots.
- Overall, the data demonstrates relatively stable completion rates throughout the week across various time slots, with minor fluctuations on specific days and slots.

Completion Rate at Slot vs Day level



Completion rate at drop area level:

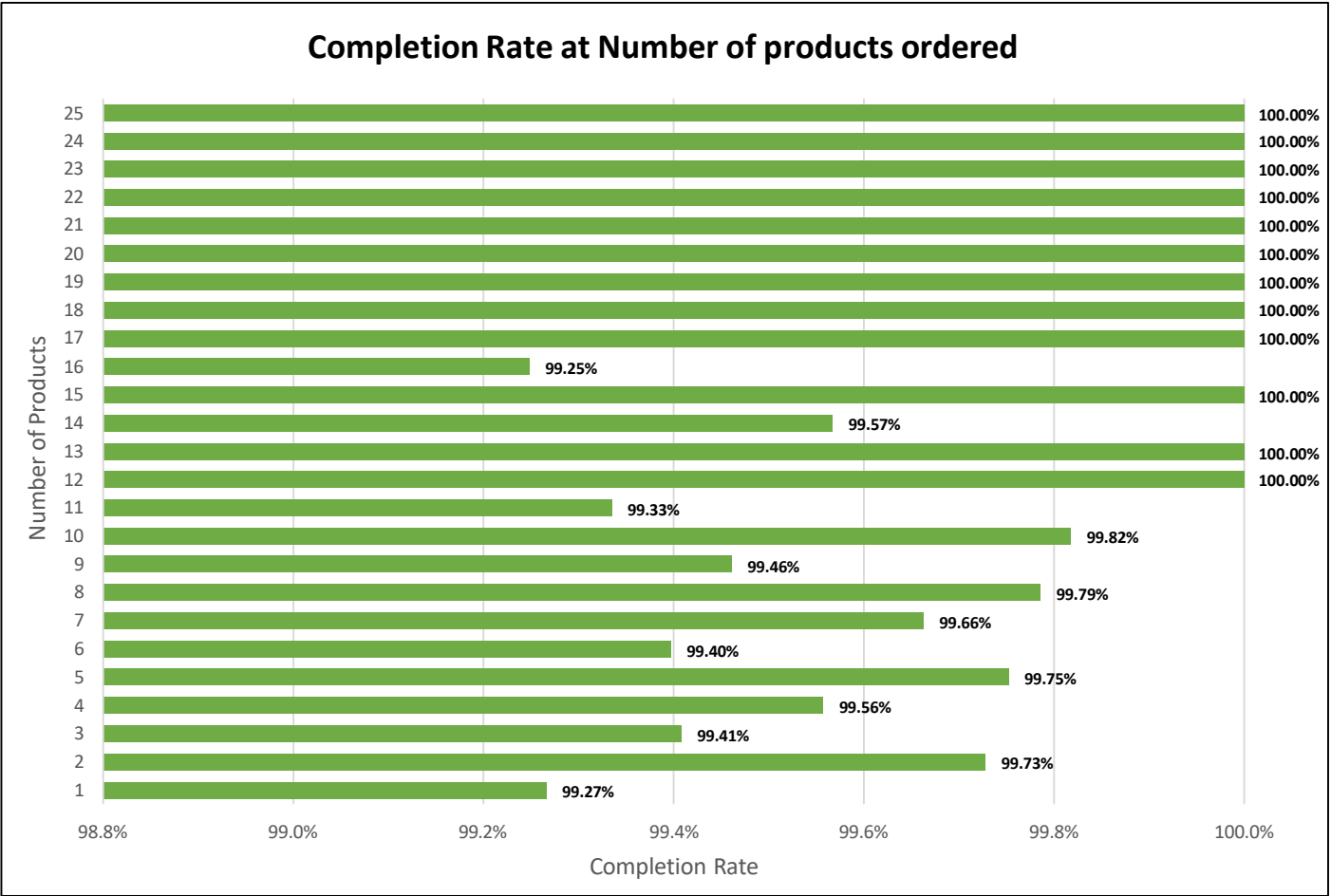
This analysis examines completion rates across various drop areas to pinpoint disparities and potential factors impacting order completion within different regions.



- Majority of drop areas exhibit exceptionally high completion rates, with 42 areas registering a perfect 100.0% completion rate.
- However, Whitefield and Cox Town display a 0.0% completion rate, indicating significant issues or challenges in completing orders in these areas.
- Among the areas with non-perfect completion rates, Bellandur, ETV stands at 50.0%, while Marathahalli, Domlur - EGL, and Viveka Nagar range from 66.7% to 85.7%.
- BTM Stage 1, Bommanahalli, Manipal County, Bellandur - Green Glen, and several other areas showcase impressively high completion rates, ranging between 97.1% to 99.7%.
- Overall, the average completion rate across all drop areas stands at a commendable 99.55%, signifying efficient order completions in most areas with a few exceptions needing attention for

Completion rate at number of products ordered level:

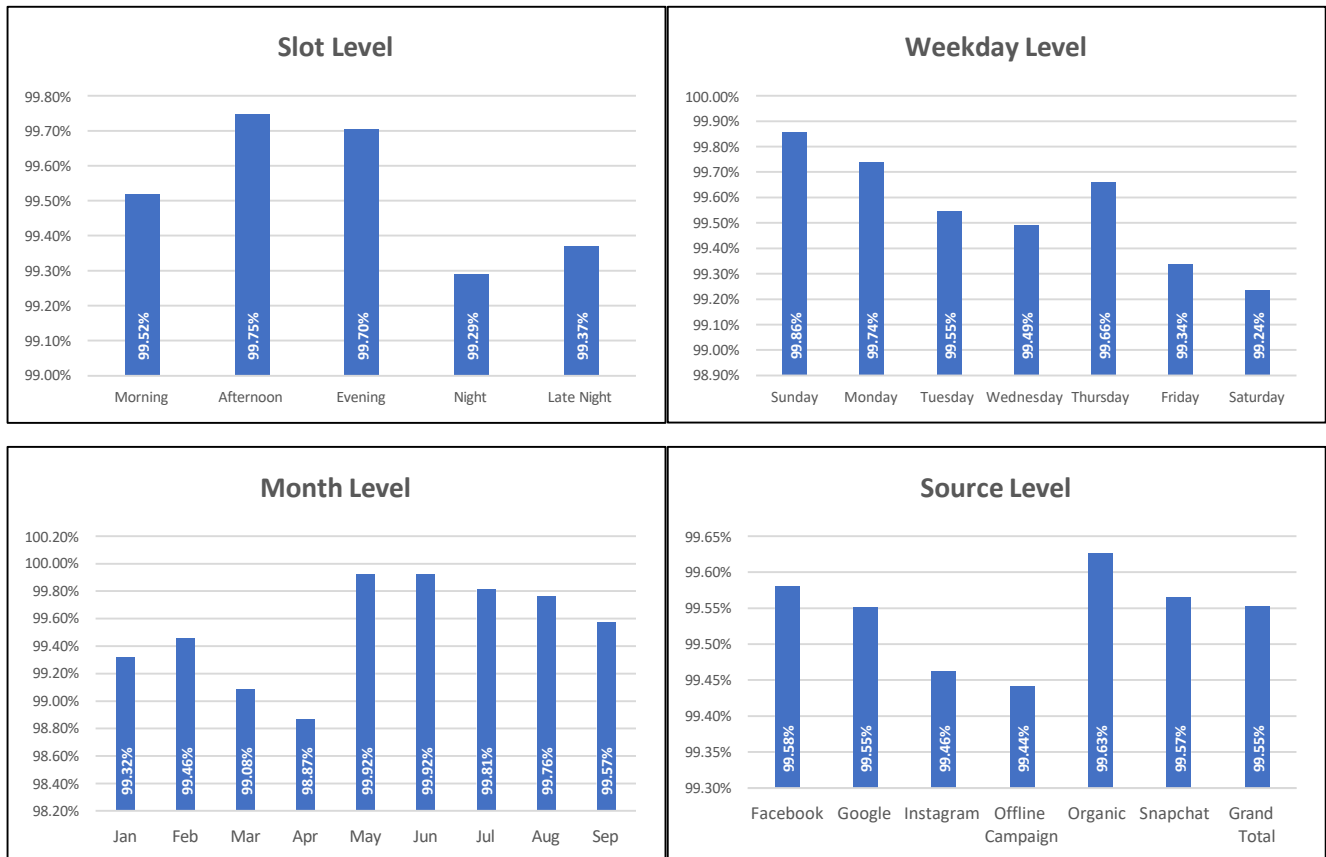
This analysis scrutinizes completion rates concerning the quantity of products ordered to understand if order size correlates with completion efficiency.



- The completion rates for orders with varying numbers of products show a high degree of efficiency, averaging at 99.55% overall.
- Orders with number of products 12 to 15 and 17 to 24 products exhibit perfect 100.0% completion rates.
- The completion rates remain consistently high across most product quantity ranges, ranging from 99.25% to 99.82%.
- Orders with a higher number of products (12 and above) consistently maintain perfect completion rates, indicating robust fulfilment despite higher complexity.
- The data reflects efficient order completion across different product quantity ranges, suggesting reliable fulfilment processes across varying order sizes.

Completion rate at different business metrics.

This analysis investigates completion rates concerning varied business metrics to uncover potential correlations between business performance and order fulfilment.



- Completion rates remain consistently high across different time slots, with the Afternoon slot exhibiting the highest completion rate at 99.75%, while Night slot has the lowest completion rate at 99.29%.
- There's a slight variance in completion rates across days of the week, with Sunday having the highest completion rate (99.86%) and Saturday the lowest (99.24%), indicating a potential correlation between higher completion rates and weekends.
- Monthly completion rates fluctuate slightly but generally maintain a relatively high percentage throughout the year, ranging from 98.87% in April to 99.92% in May and June. This indicates a stable overall performance across months, albeit with minor fluctuations.
- Acquisition sources show consistent completion rates, with Facebook having the highest completion rate at 99.58% and Offline Campaign and Instagram having slightly lower rates at 99.44% and 99.46%, respectively. This suggests a consistent performance across various acquisition channels, with only marginal differences in completion rates.

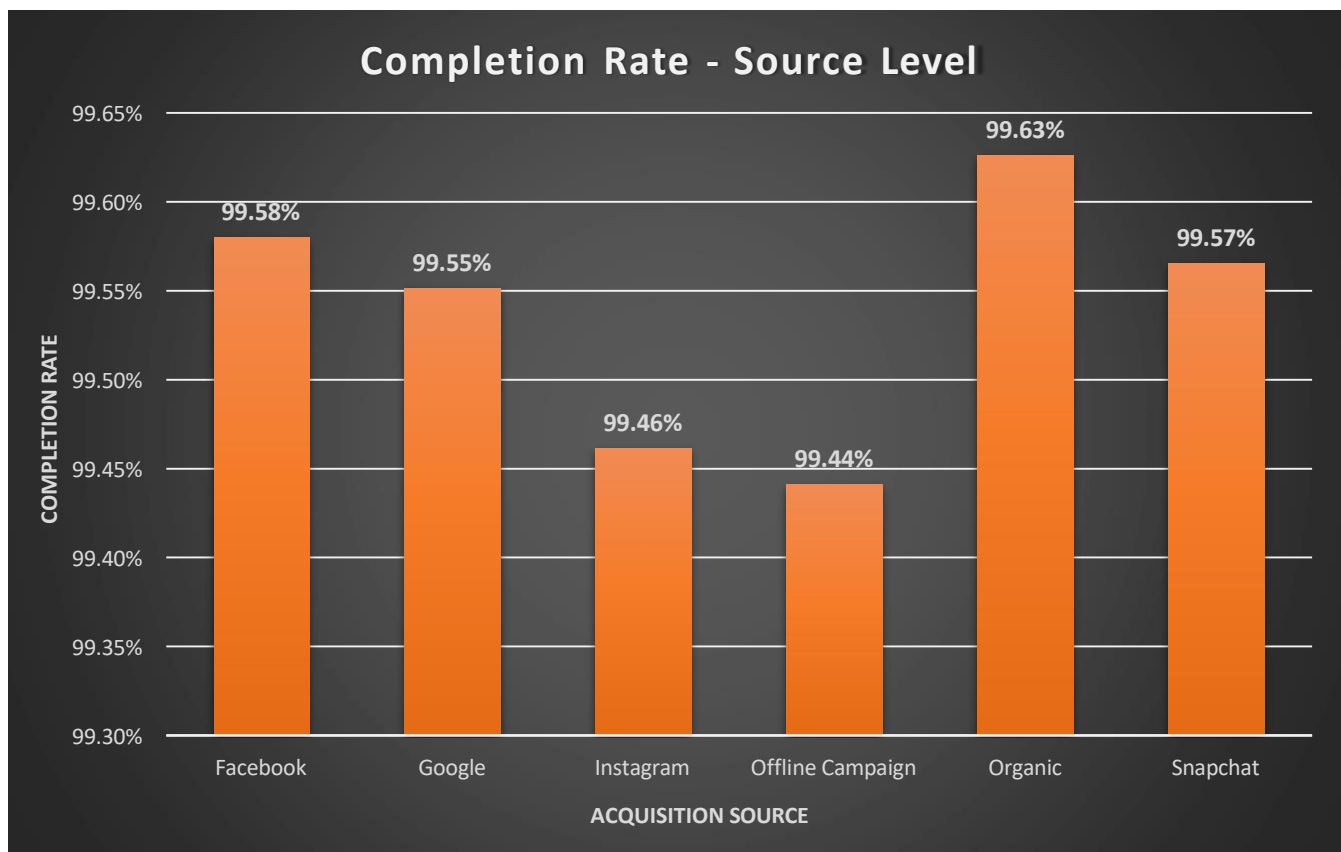
CUSTOMER LEVEL ANALYSIS

Customer Level Analysis focuses on studying customer behaviour, preferences, and interactions within the sales data. It involves analysing customer demographics, purchasing patterns, lifetime value, loyalty, and engagement metrics. This analysis aids in segmenting customers, understanding their needs, predicting future behaviour, and devising targeted marketing strategies or personalized services to enhance customer satisfaction and retention.

Let us perform Customer level analysis by comparing few business metrics.

Completion Rate at Acquisition source level:

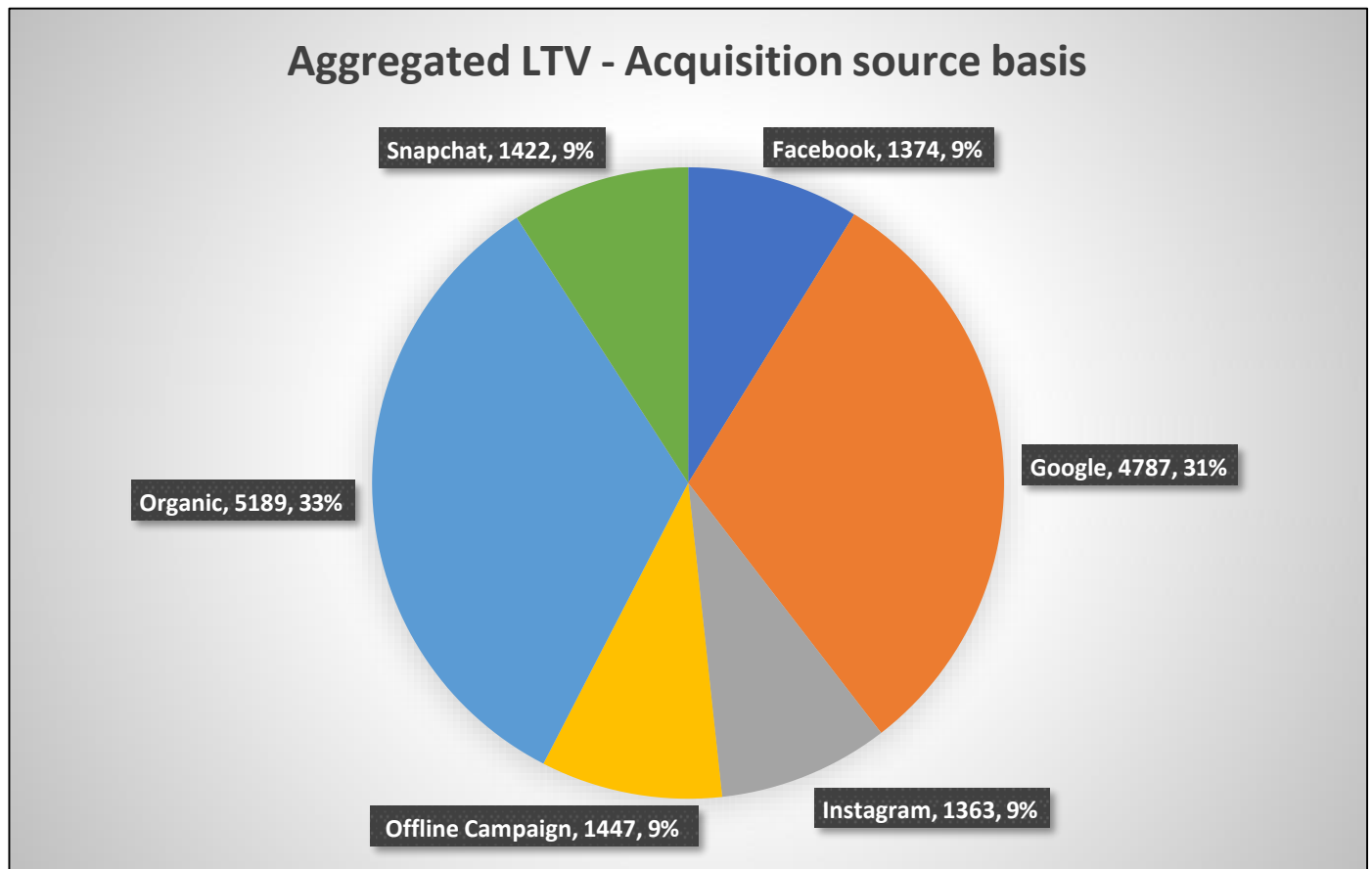
This analysis explores completion rates based on different acquisition sources to comprehend the relationship between customer acquisition channels and order completion efficiency.



- Completion rates vary marginally across different acquisition sources, with the overall average completion rate at 99.55%.
- Organic and Facebook sources demonstrate relatively higher completion rates at 99.63% and 99.58%, respectively.
- Google and Snapchat also show commendable completion rates close to the overall average at 99.55% and 99.57%, respectively.
- Instagram and Offline Campaign sources exhibit slightly lower completion rates, but still notably high at 99.46% and 99.44%, respectively.
- Overall, the data suggests consistent and efficient order completion rates across various acquisition sources, with minimal variations between different platforms.

Aggregated LTV at customer acquisition source level:

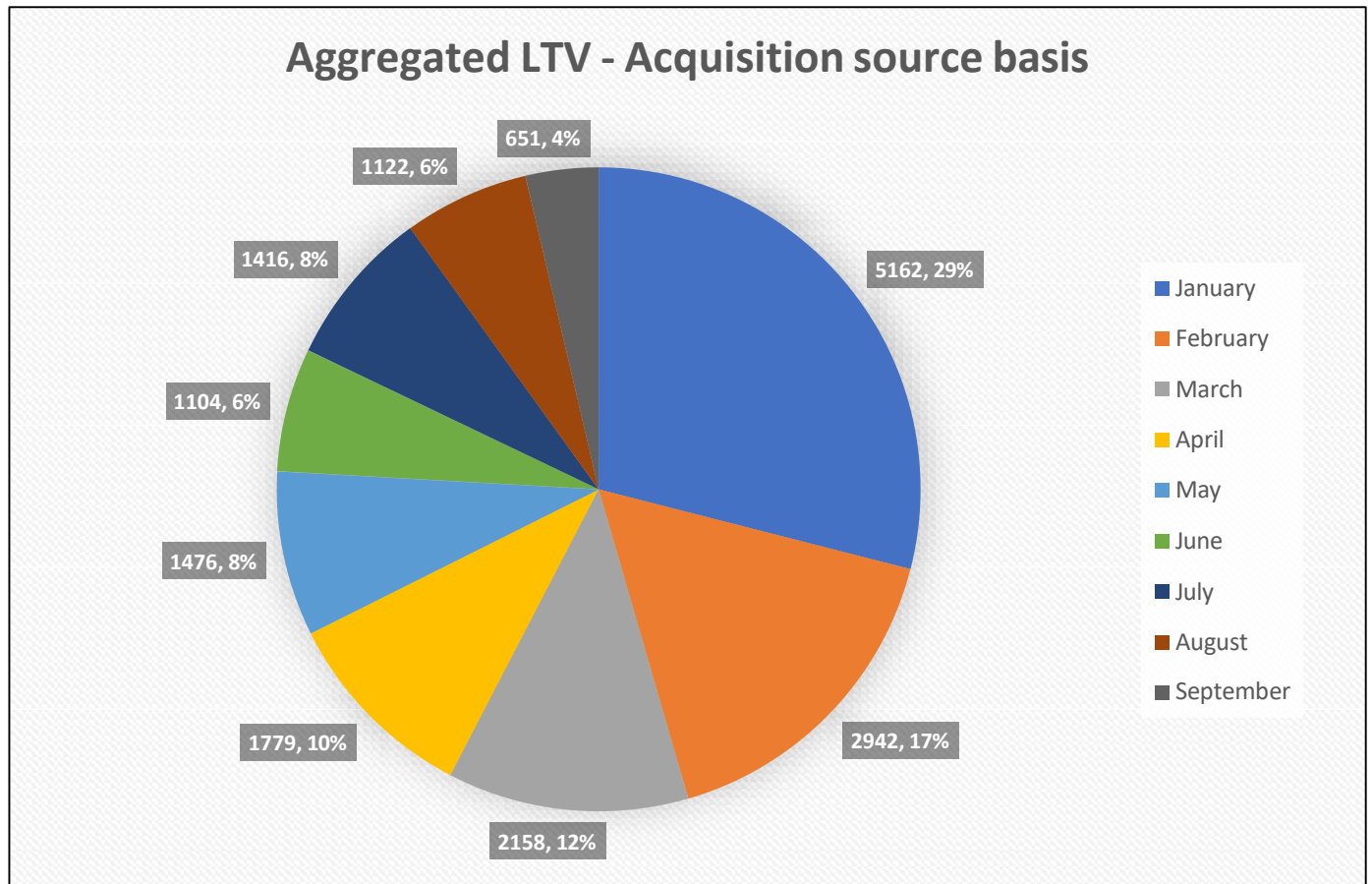
This analysis aggregates Customer Lifetime Value (LTV) based on various customer acquisition sources to discern the long-term value derived from distinct acquisition channels.



- Google and Organic sources exhibit notably higher Aggregated Customer Lifetime Values (LTV) at \$4,787 and \$5,189, respectively, contributing almost 64% of the total aggregated LTV, indicating potentially more valuable customers acquired through these channels.
- Facebook, Instagram, Offline Campaign, and Snapchat sources display relatively lower but still considerable Aggregated LTVs ranging from \$1,363 to \$1,447.
- Overall, the data suggests varying but meaningful customer acquisition values across different sources, with Google and Organic sources standing out as significant contributors to the total Aggregated LTV.

Aggregated LTV at acquisition month level:

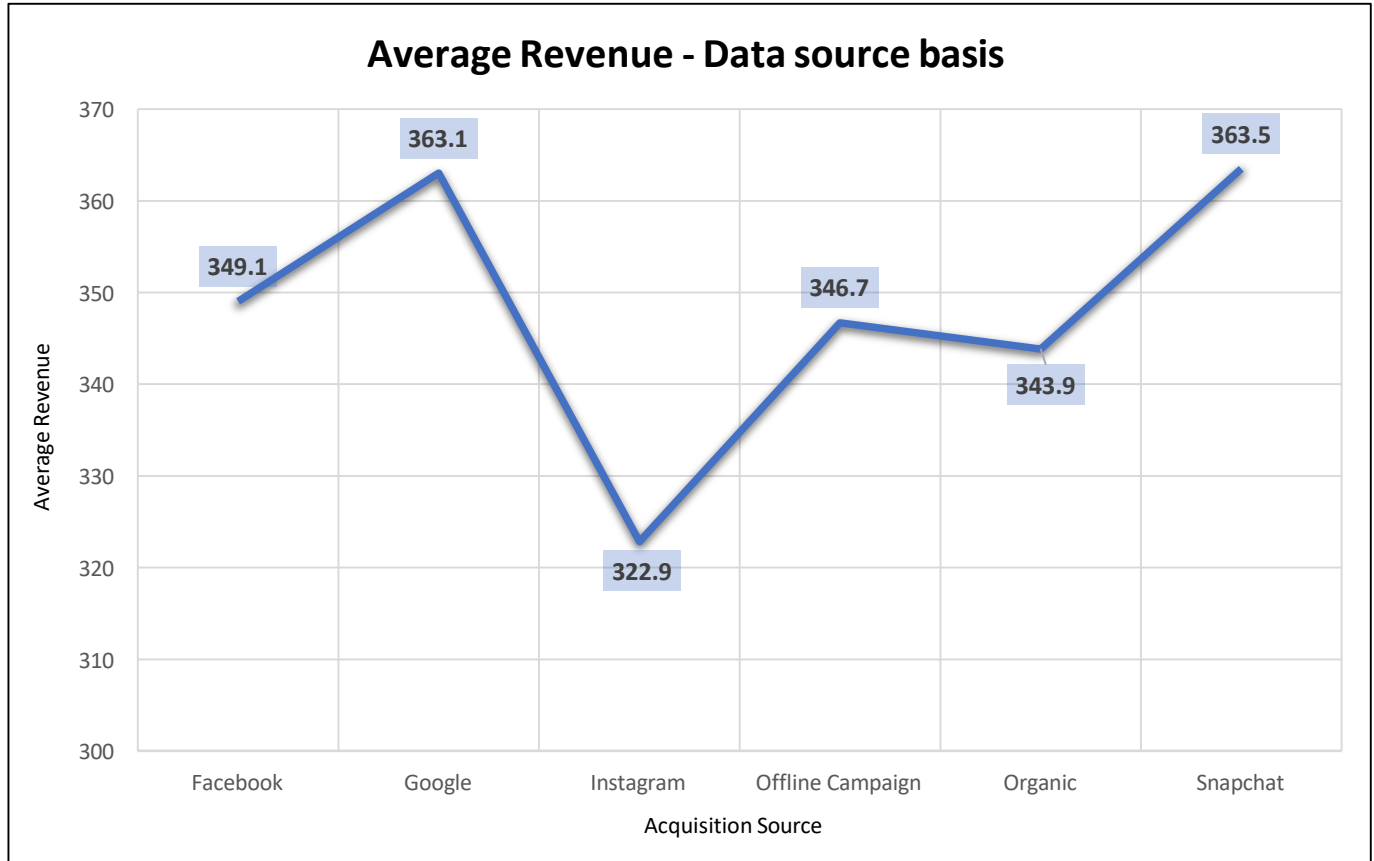
This analysis aggregates Customer Lifetime Value (LTV) across acquisition months to understand the cumulative value generated over specific acquisition periods.



- January shows the highest Aggregated Customer Lifetime Value (LTV) at 5162, indicating potentially more valuable customers acquired during this month.
- February, March, and April also exhibit substantial Aggregated LTVs, ranging from 1779 to 2942.
- From May onwards, there is a consistent decrease in Aggregated LTV, with September displaying the lowest value at 651.
- The overall Grand Total Aggregated LTV stands at 2134.6, suggesting the cumulative value generated from customers acquired across all months.
- The data implies varying customer acquisition values across different months, highlighting potential trends or variations in customer lifetime value over the course of the year.

Average Revenue per order at different customer acquisition source level:

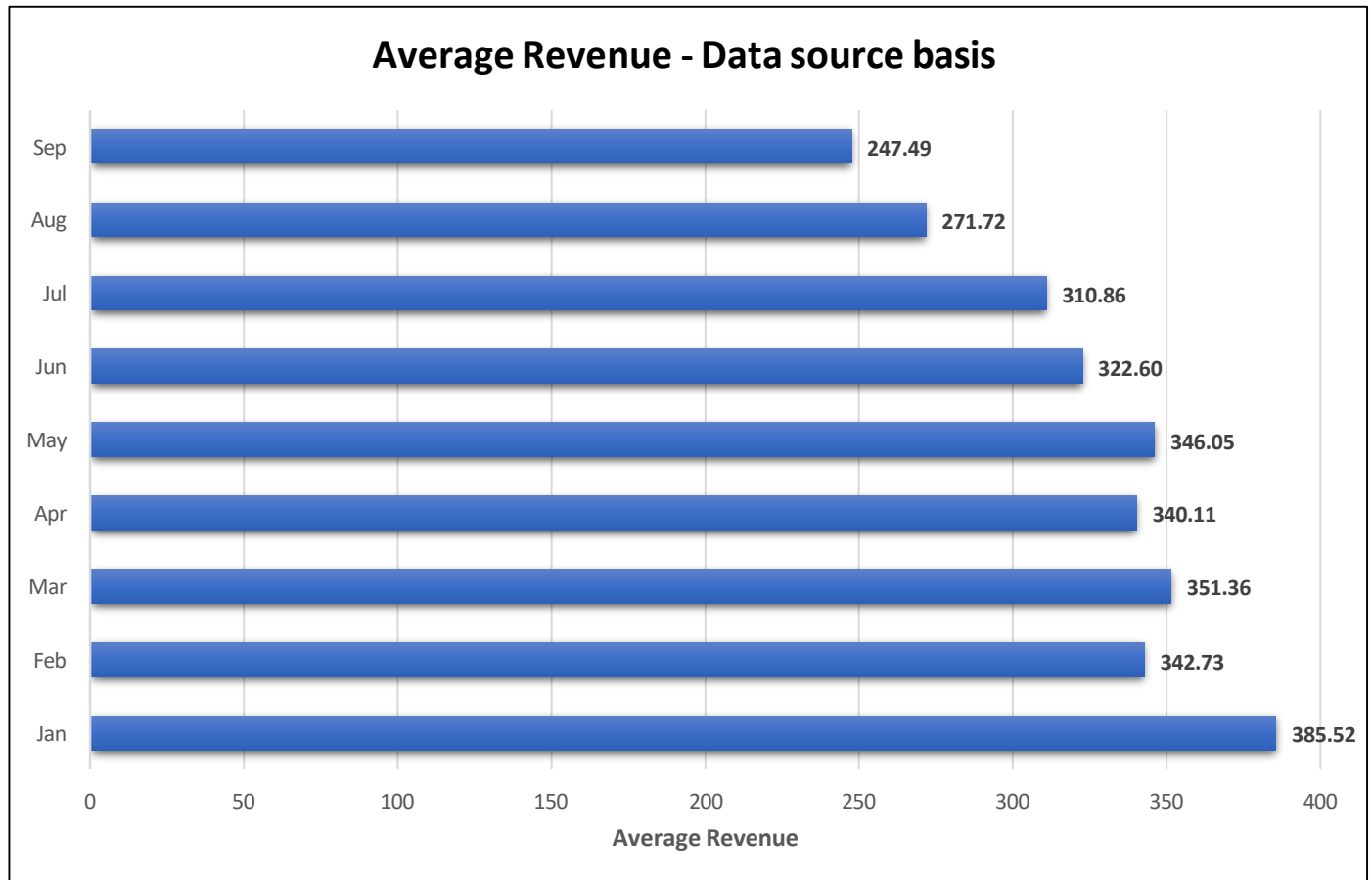
This analysis calculates the average revenue per order attributed to diverse customer acquisition sources, elucidating revenue patterns linked to different acquisition channels.



- Google and Snapchat sources exhibit relatively higher average revenue per order at \$363.1 and \$363.5, respectively, suggesting potentially more valuable orders from these acquisition sources.
- Facebook, Offline Campaign, and Organic sources display slightly lower but still considerable average revenues per order, ranging from \$343.9 to \$349.1.
- Instagram source shows the lowest average revenue per order at \$322.9, indicating comparatively lower order values from this acquisition channel.
- Overall, while there are minor variations, the average revenue per order across different customer acquisition sources remains relatively close, with Google and Snapchat standing out with slightly higher values.
- The Grand Total average revenue per order sits at \$348.9, indicating the overall average revenue derived per order across all customer acquisition sources.

Average Revenue per order at acquisition month level:

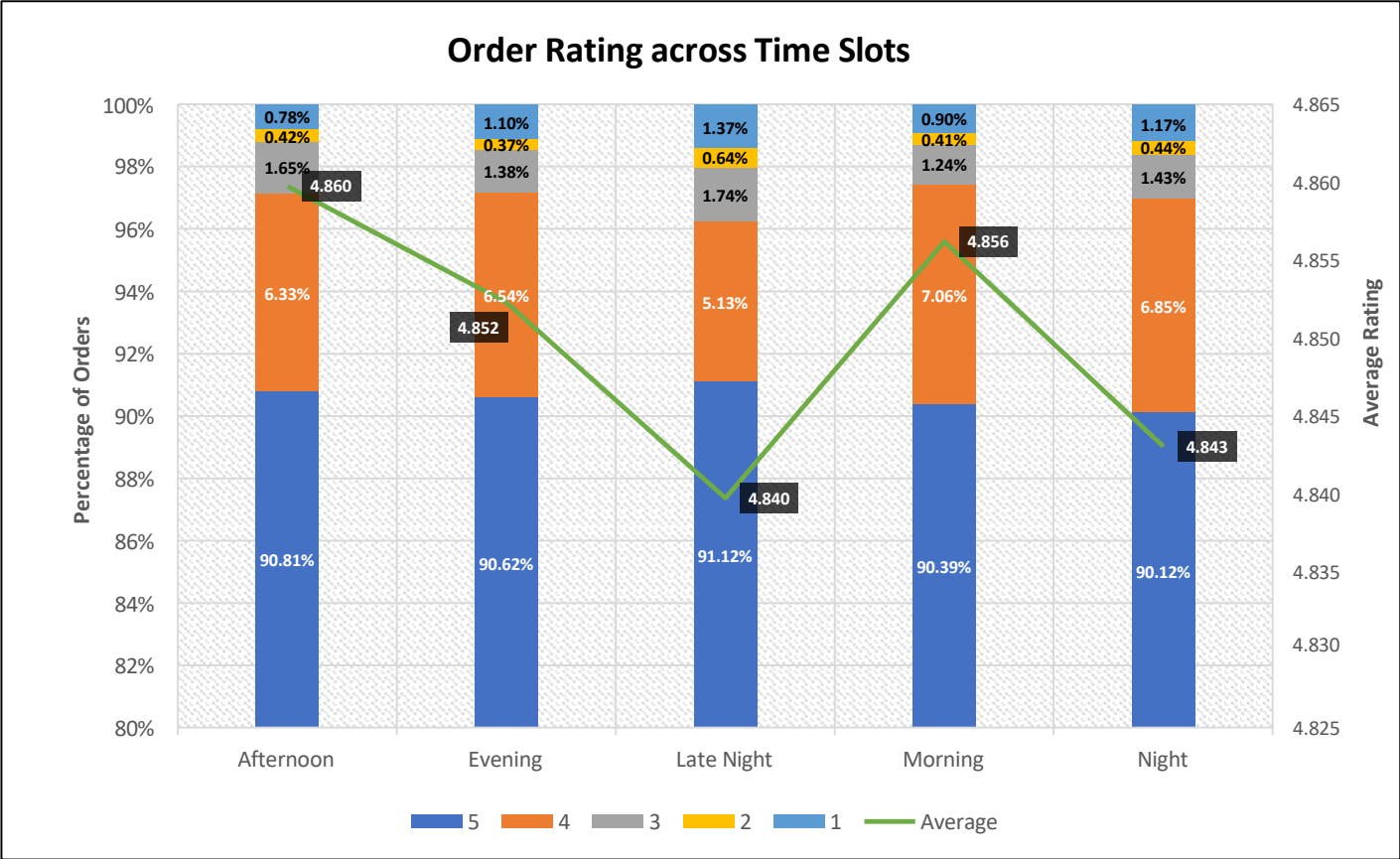
This analysis computes the average revenue per order over acquisition months to identify revenue fluctuations across specific acquisition periods.



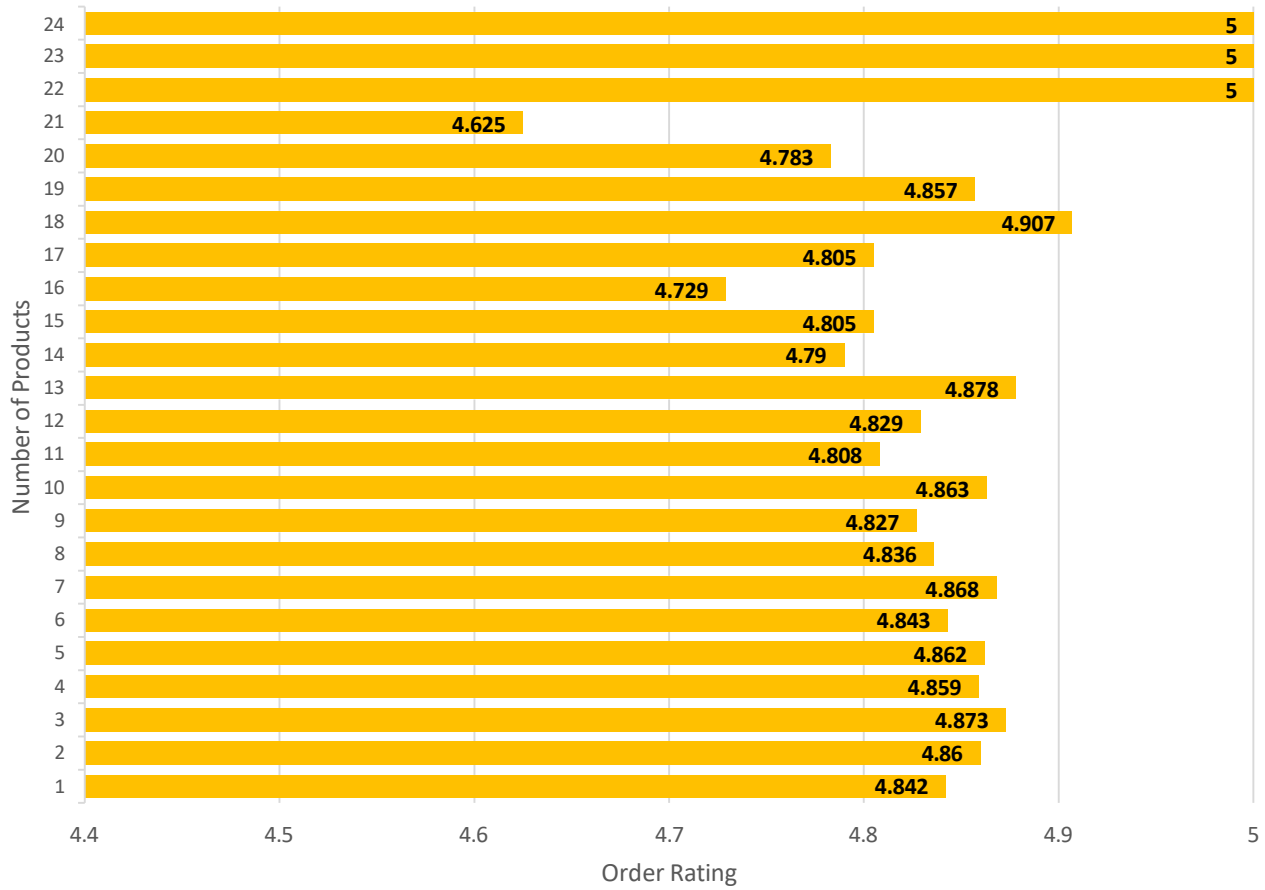
- January demonstrates the highest average revenue per order at \$385.52, indicating potentially more lucrative transactions during this month.
- March and May also exhibit relatively higher average revenues per order, ranging from \$340.11 to \$351.36, suggesting strong order values during these months.
- From June onwards, there is a consistent decrease in the average revenue per order, with September displaying the lowest value at \$247.49.
- The overall Grand Total average revenue per order stands at \$348.93, indicating the average revenue derived per order across all acquisition months.
- The data implies varying average order values across different months, highlighting potential trends or fluctuations in revenue generation throughout the year.

Pattern in order rating across slots, number of items placed, delivery charges, discount:

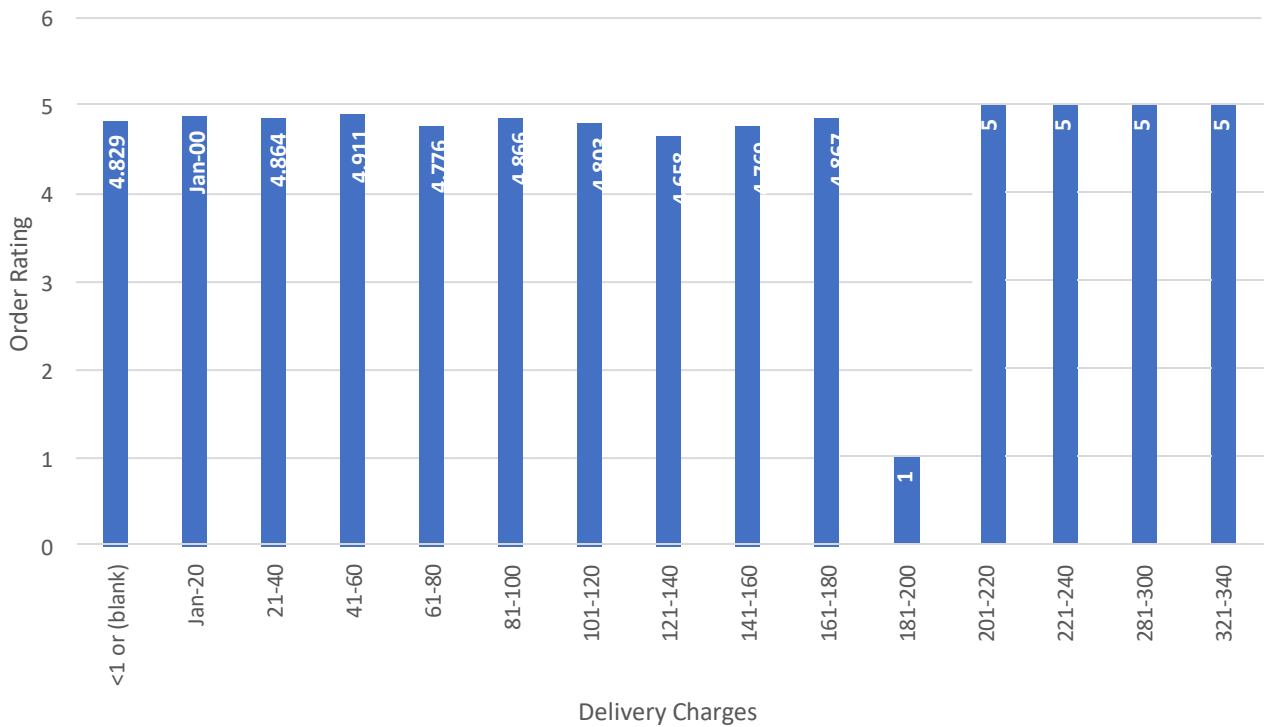
This analysis examines patterns in order ratings concerning slots, order quantity, delivery charges, and discounts, aiming to uncover correlations impacting customer ratings.



Order Rating at No. of Products



Order Rating at Delivery Charge



- Order ratings show a consistent pattern across different time slots, with all slots ranging between 4.840 to 4.860, except for minor variations, indicating overall satisfaction regardless of the time of day.
- There's a correlation between the number of products in an order and order ratings. Larger orders exhibit slightly higher ratings, with orders of 22, 23, and 24 products achieving a perfect 5.000 rating.
- Delivery charge brackets with specific ranges like 21-40, 161-180, and 281-340 exhibit significantly higher average order ratings, with most ranges maintaining an average rating above 4.800, except for certain ranges like 181-200, which display a low average rating of 1.000.
- Orders with varying discount brackets show diverse average order ratings. Higher discount brackets like 301-450, 551-650, and 651-750 have notably higher ratings, with most ranges maintaining an average rating above 4.800, except for a few ranges dipping slightly below this average.
- Overall, most categories demonstrate order ratings in the range of 4.800 to 5.000, indicating a high level of satisfaction, except for a few specific brackets in delivery charge and discount ranges that exhibit lower ratings.
- Higher discount brackets tend to positively influence order ratings, while the impact of delivery charge ranges on order ratings varies, with specific brackets significantly impacting customer satisfaction.
- Time slots do not significantly impact order ratings, as they all maintain relatively high ratings, indicating consistent service quality across different times of the day.

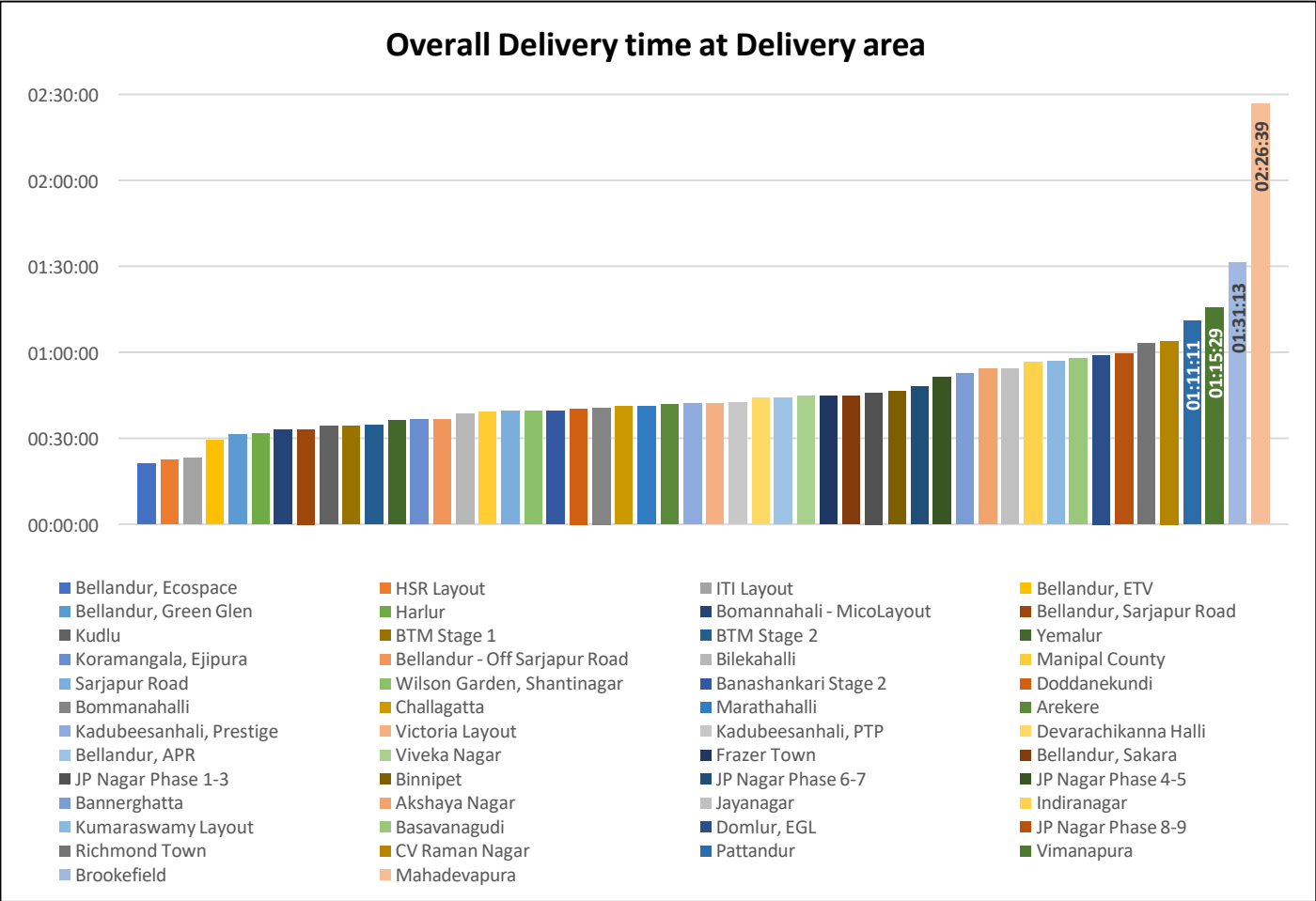
DELIVERY LEVEL ANALYSIS

Delivery Level Analysis involves examining data related to the delivery process, including delivery times, delays, accuracy, and customer feedback. This analysis aims to evaluate the efficiency and effectiveness of the delivery system, identifying areas for improvement to ensure timely and reliable delivery services. Insights derived from this analysis help in streamlining logistics, minimizing delays, and enhancing overall customer experience.

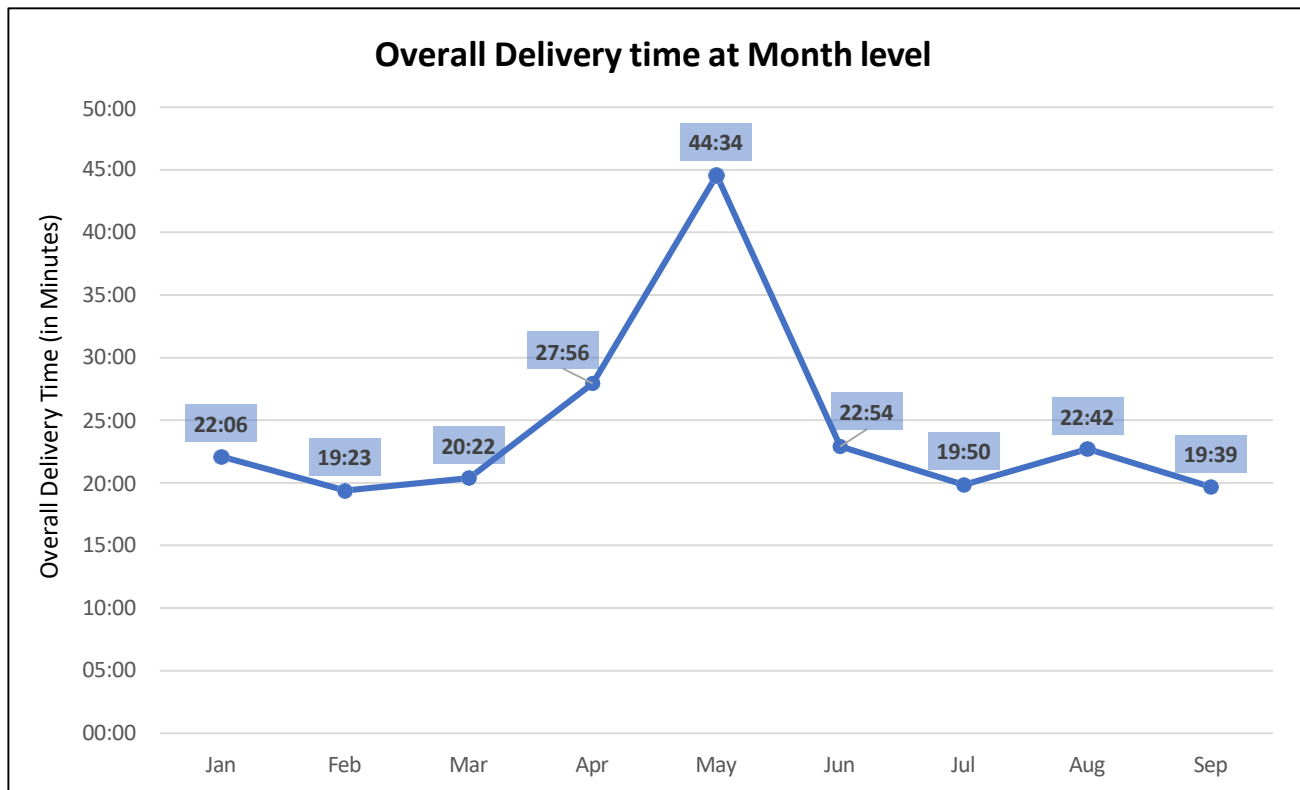
Let us perform Delivery level analysis by comparing few business metrics.

Average overall delivery time at month and delivery area level:

This analysis calculates the average delivery time across months and delivery areas, providing insights into overall delivery efficiency.



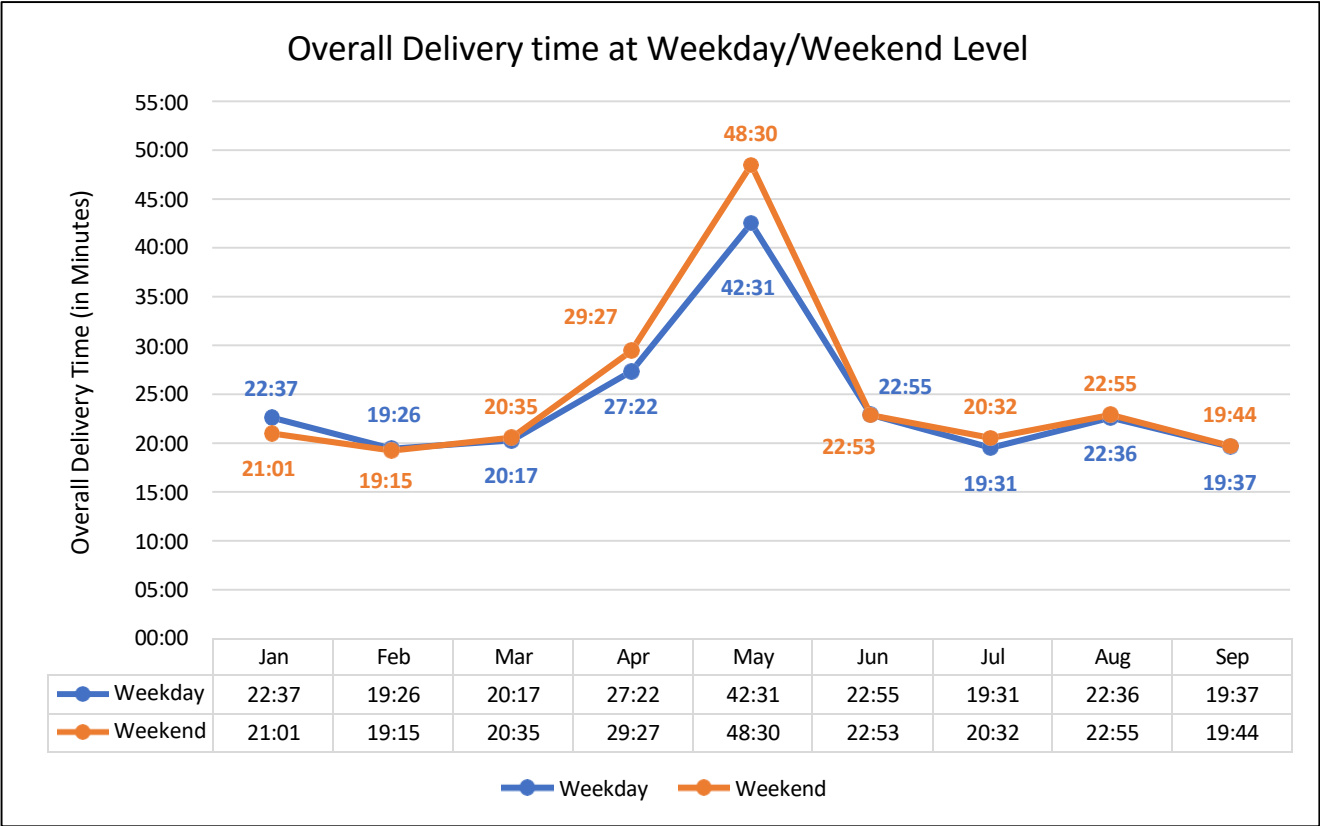
Delivery Area	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Grand Total
Bellandur, Ecospace	21:19									00:21:19
HSR Layout	19:51	17:43	18:39	26:30	42:04	21:17	18:14	20:23	17:24	00:22:29
ITI Layout	22:13	18:37	20:29	26:56	44:32	23:17	20:01	21:34	19:01	00:23:18
Bellandur, ETV									29:36	00:29:36
Bellandur, Green Glen	28:26	27:51	32:10	35:45	50:55	27:08	26:37	31:04	25:12	00:31:25
Harlur	30:25	26:30	27:07	33:50	01:00:07	27:43	26:37	34:54	29:32	00:31:53
Bomannahali - MicoLayout	30:11	31:53	29:36	33:19	59:17	34:00	28:15	29:48	24:47	00:32:56
Bellandur, Sarjapur Road	31:48	28:28	32:16	35:58	01:03:46	26:36	30:07	26:01	27:08	00:33:07
Kudlu	29:22	29:02	30:47	37:44	55:16	29:59	29:14	32:10	25:22	00:34:21
BTM Stage 1	30:02	31:18	36:41	36:11	39:56	25:59	45:26	31:11	23:27	00:34:24
BTM Stage 2	28:55	26:04	27:42	29:34	48:31	25:25	40:49	38:39	33:41	00:34:51
Yemalur		33:43		37:22		27:17	42:23	38:59	34:41	00:36:12
Koramangala, Ejipura	26:45	25:36	26:15	44:44	54:25	30:54	28:15	27:43	22:48	00:36:31
Bellandur - Off Sarjapur Road	35:17	15:16	35:56	40:56	51:37	29:59	32:09	28:05	30:29	00:36:41
Bilekahalli	37:03		53:34		44:00		49:19	24:14	28:04	00:38:26
Manipal County	34:47	30:46	35:09	43:15	01:02:25	34:55	43:08	37:11	37:58	00:39:13
Sarjapur Road	41:13			23:52	01:01:25	28:04	32:50		27:57	00:39:27
Wilson Garden, Shantinagar			37:37		33:39				43:36	00:39:37
Banashankari Stage 2						24:57	54:22			00:39:39
Doddanekundi							38:37	42:09		00:40:23
Bommanahalli	32:04	24:58	33:45	40:48	01:04:10	29:40	35:55	39:18	23:17	00:40:38
Challagatta								41:07		00:41:07
Marathahalli	32:37				49:48					00:41:13
Arekere	28:17			51:59	56:02	53:12			33:48	00:41:56
Kadubeesanahali, Prestige		35:49	27:32		01:03:32		47:08		21:00	00:42:16
Victoria Layout									42:18	00:42:18
Kadubeesanahali, PTP					00:42:35					00:42:35
Devarachikanna Halli	25:32	42:55	47:03	01:05:45		26:51			36:55	00:44:13
Bellandur, APR	49:31	42:05	43:34	52:44	34:27	40:21	45:42	46:37	41:31	00:44:14
Viveka Nagar				32:26	56:08	26:26	40:26			00:44:37
Frazer Town			44:49							00:44:49
Bellandur, Sakara			49:47	01:02:27	01:11:17	25:53	28:12	36:05	21:11	00:44:58
JP Nagar Phase 1-3	32:48		59:38	38:39	57:25			41:18		00:45:58
Binnipet							46:29			00:46:29
JP Nagar Phase 6-7		49:07	32:24		53:48	44:57				00:47:59
JP Nagar Phase 4-5	37:47	56:11		45:30	55:56			52:42		00:51:26
Bannerghatta	52:51		40:12		01:00:38			57:08		00:52:44
Akshaya Nagar			54:56	49:12	01:02:12	50:20		01:44:37	00:36:38	00:54:16
Jayanagar	56:05						53:02	53:58		00:54:22
Indiranagar				01:08:57	54:35	37:52	42:35			00:56:38
Kumaraswamy Layout		53:39			58:26		57:32			00:57:01
Basavanagudi					57:49					00:57:49
Domlur, EGL	37:24			43:35	01:37:15				35:11	00:59:03
JP Nagar Phase 8-9						59:28				00:59:28
Richmond Town					01:03:24					01:03:24
CV Raman Nagar						01:03:57				01:03:57
Pattandur								01:11:11		01:11:11
Vimanapura					01:15:29					01:15:29
Brookefield							01:31:13			01:31:13
Mahadevapura					02:26:39					02:26:39
Grand Total	22:06	19:23	20:22	27:56	44:34	22:54	19:50	22:42	19:39	00:24:15



- The data showcases variations in the average overall delivery time across different delivery areas.
- Bellandur, Ecospace displays the lowest average delivery time, totalling 21 minutes and 19 seconds.
- Mahadevapura, Vimanapura, and Brookefield exhibit the longest average delivery times, exceeding two hours.
- Generally, there's a significant range in delivery times, from less than 30 minutes to over two hours.
- This data suggests considerable diversity in delivery efficiency among different areas, potentially indicating logistical challenges or varying distances covered during deliveries.

Average Overall delivery time at month and weekday/weekend level:

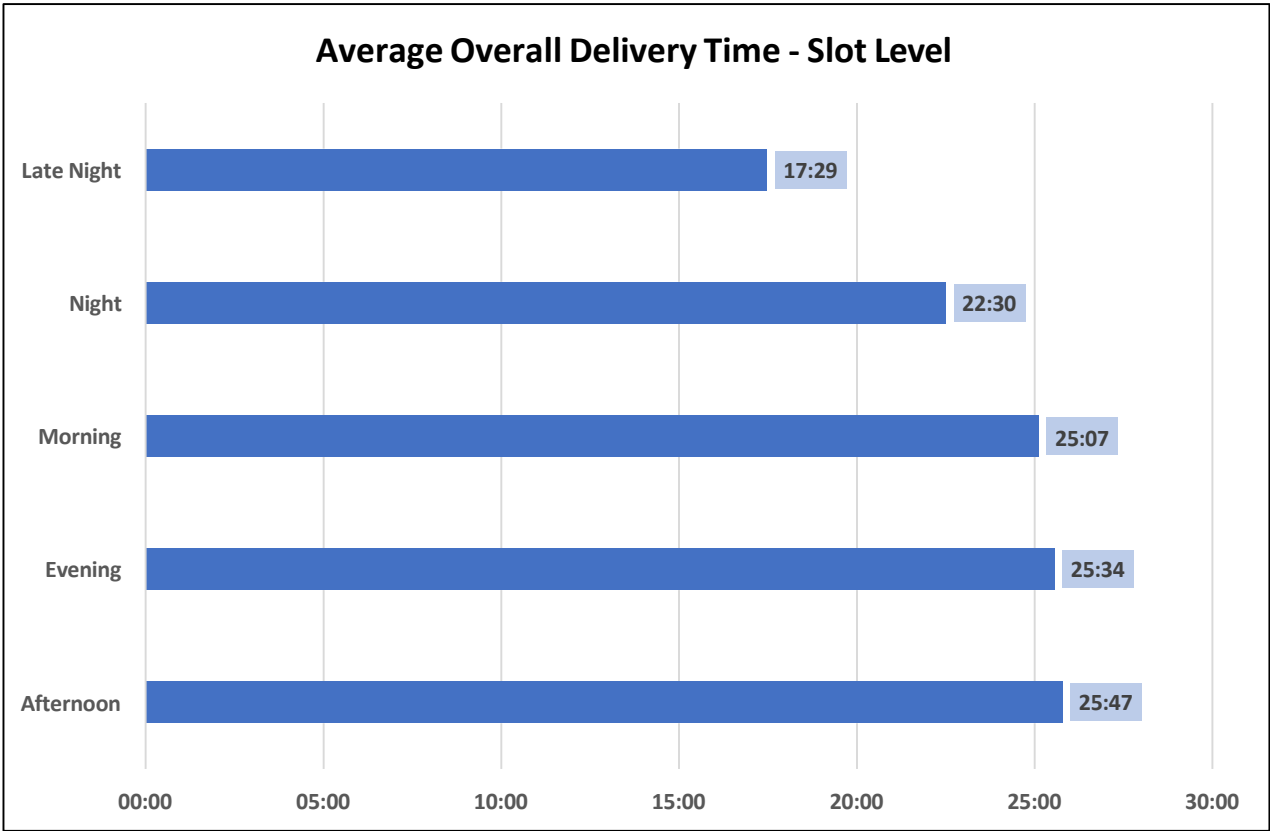
This analysis computes the average delivery time across months categorized by weekdays and weekends to assess delivery performance during different periods.



- There is a noticeable difference in average overall delivery times between weekdays and weekends throughout the months.
- September shows the shortest average delivery times on both weekdays and weekends.
- May exhibits the longest average delivery times, significantly higher on weekends compared to weekdays.
- Overall, weekends tend to have slightly longer delivery times compared to weekdays, with an average difference of around 1 hour and 26 minutes.
- This data suggests a potential impact of day-of-the-week factors on delivery efficiency, requiring further investigation into operational management strategies.

Average overall delivery time at slot level:

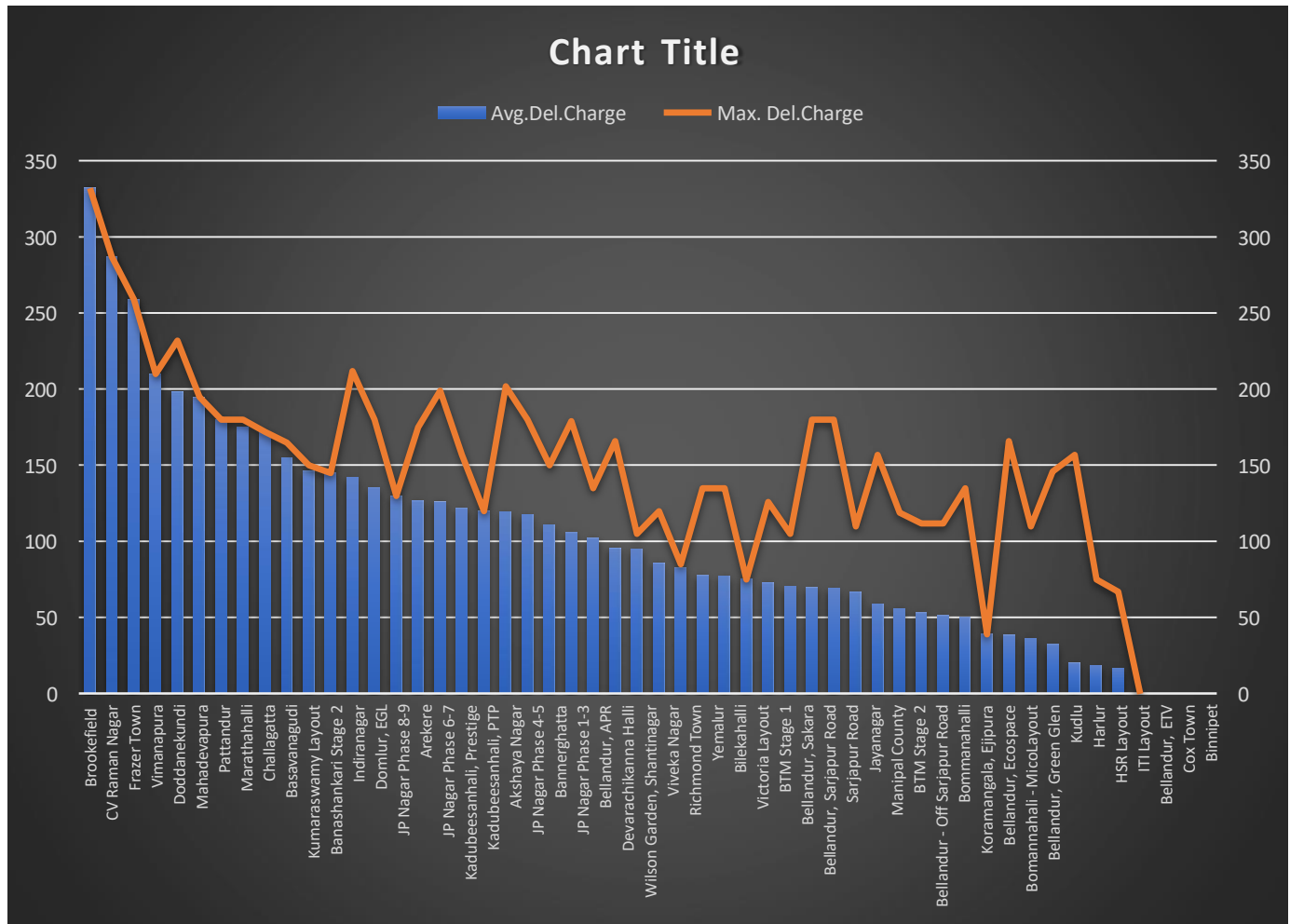
This analysis computes the average delivery time across months categorized by weekdays and weekends to assess delivery performance during different periods.



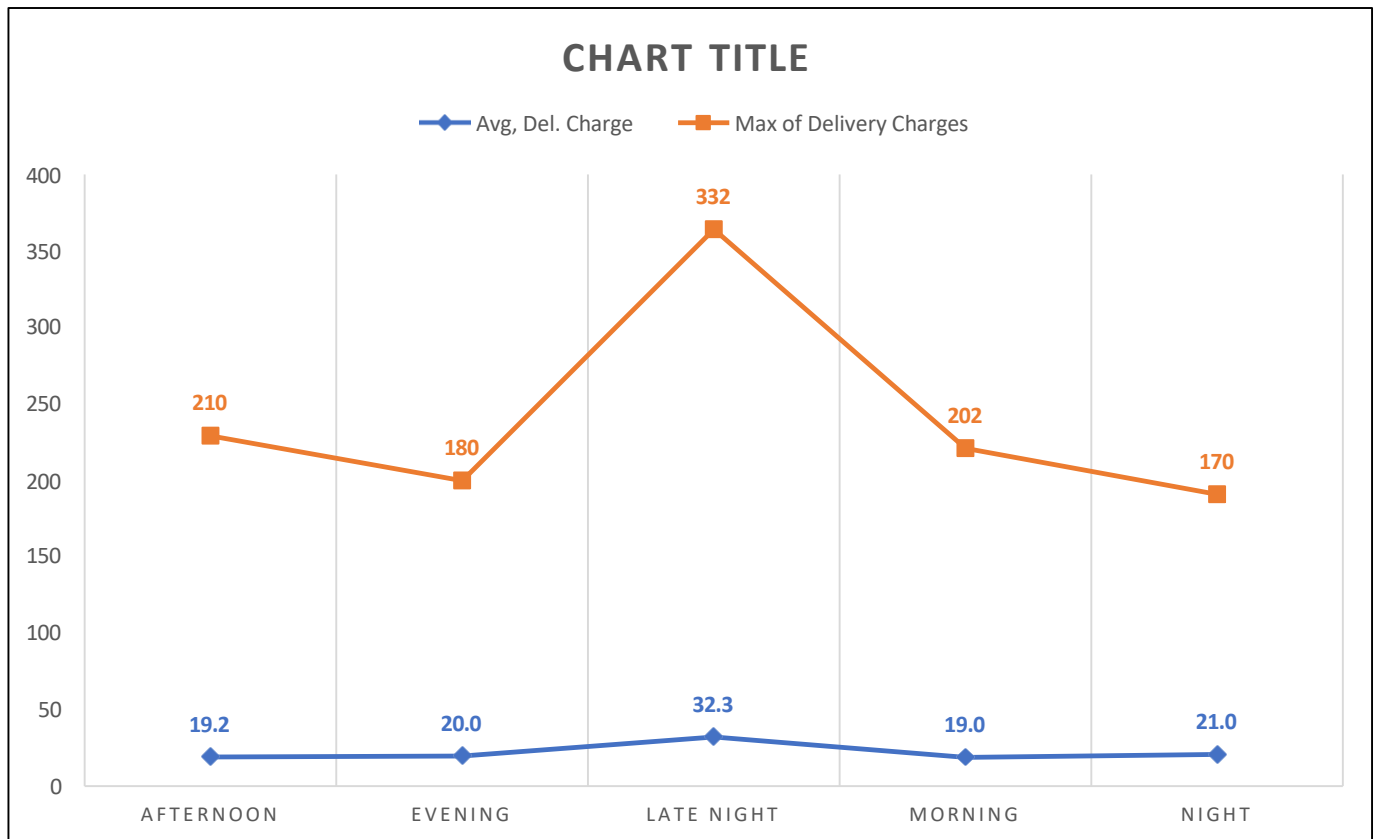
- The late-night slot shows the shortest average overall delivery time, recorded at 17 minutes and 29 seconds.
- Night and morning slots have relatively shorter average delivery times compared to afternoon and evening slots.
- Afternoon and evening slots exhibit longer average delivery times, both slightly exceeding 25 minutes.
- Overall, there's a consistent variation in delivery times across different time slots, impacting operational efficiency.
- These insights highlight potential areas for optimization, especially during afternoon and evening slots, to improve delivery efficiency and customer satisfaction.

Pattern changes in delivery charges with slot or delivery area:

This analysis examines alterations in delivery charges concerning specific time slots or delivery areas to identify patterns impacting delivery cost dynamics.



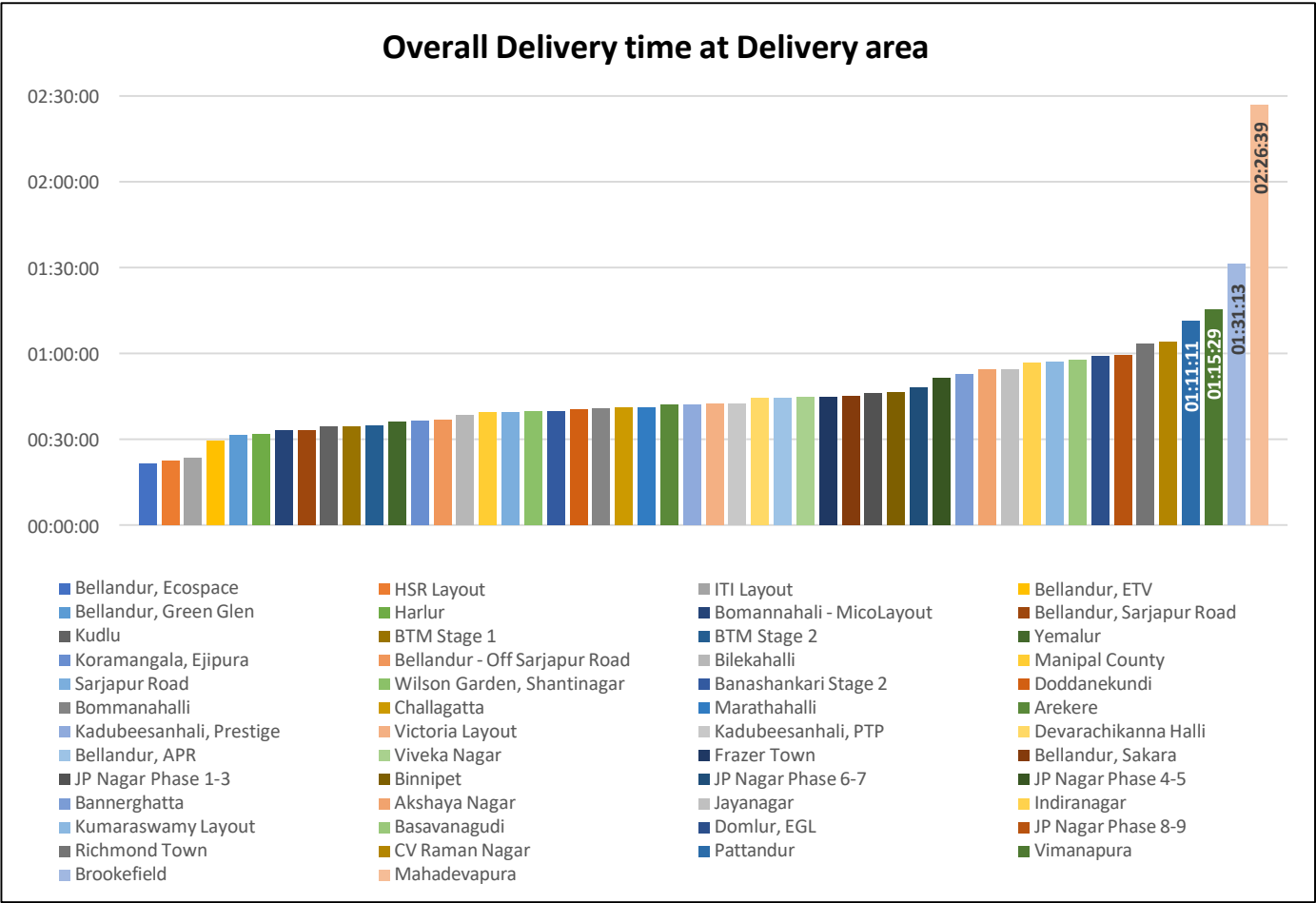
- Variation in average delivery charges is noticeable across different delivery areas, ranging from a minimum of 0.00 to a maximum of 332.00.
- Higher maximum delivery charges are observed in areas like Brookefield, Indiranagar, and JP Nagar Phase 6-7, indicating potential factors influencing these higher costs.
- Areas like Bellandur, Ecospace, Bomannahalli - MicoLayout, and Bellandur, Green Glen have notably lower average delivery charges.
- There seems to be a pattern where certain regions exhibit relatively higher average delivery charges compared to others, suggesting possible correlations with location-specific factors or demand dynamics.
- The maximum delivery charge of 332.00 is notably higher than other regions, possibly indicating specific premium services or factors influencing this higher charge.



- The late-night slot shows the shortest average overall delivery time, recorded at 17 minutes and 29 seconds.
- Night and morning slots have relatively shorter average delivery times compared to afternoon and evening slots.
- Afternoon and evening slots exhibit longer average delivery times, both slightly exceeding 25 minutes.
- Overall, there's a consistent variation in delivery times across different time slots, impacting operational efficiency.
- These insights highlight potential areas for optimization, especially during afternoon and evening slots, to improve delivery efficiency and customer satisfaction.

Pattern changes in delivery time and delivery area:

This analysis investigates variations in delivery times concerning different delivery areas to discern patterns influencing delivery efficiency across regions.



CONCLUSION

Geographical Analysis of Discounts: Various geographic areas exhibit diverse discount rates, ranging from 0.0% to 35.6%. This highlights a location-based strategy in offering discounts, possibly targeting specific customer segments or aiming to boost sales in certain areas.

Completion Rate Insights: Completion rates show consistency across different slots, days of the week, months, and acquisition sources. This indicates a stable performance across these categories, implying efficient operations and a steady customer base across diverse time frames and sources.

Order Completion Rate by Month, Day, and Slot: Analyzing completion rates across months, days, and slots reveals various patterns, such as higher completion rates on Sundays, mornings, and during certain months. However, some slots or days exhibit lower completion rates, signaling potential areas for improvement or focused attention.

Order Ratings Analysis: Order ratings showcase consistency across slots, numbers of products, delivery charge brackets, and discount ranges. The majority of ratings hover around 4.800 to 5.000, indicating a high level of satisfaction overall.

Relationship Between Factors and Order Ratings: Larger orders and higher discount brackets tend to yield higher order ratings, suggesting that customers are more satisfied with bulk purchases and higher discounts. Meanwhile, specific ranges within delivery charges display varied impacts on customer satisfaction.

Time Slots and Customer Satisfaction: Despite minor fluctuations, time slots do not significantly impact order ratings. This suggests a consistent quality of service throughout different times of the day, maintaining overall customer satisfaction.

In conclusion, the company has a robust and stable operation with consistent completion rates across diverse timelines and sources. However, to improve overall customer satisfaction, the business could focus on optimizing delivery charges within certain ranges and strategize discount offers more effectively. Overall, the analysis reflects strong performance and identifies areas for potential targeted improvements to enhance customer experience further.