Assignment

Freshco Hypermarket Capstone

Presented By:
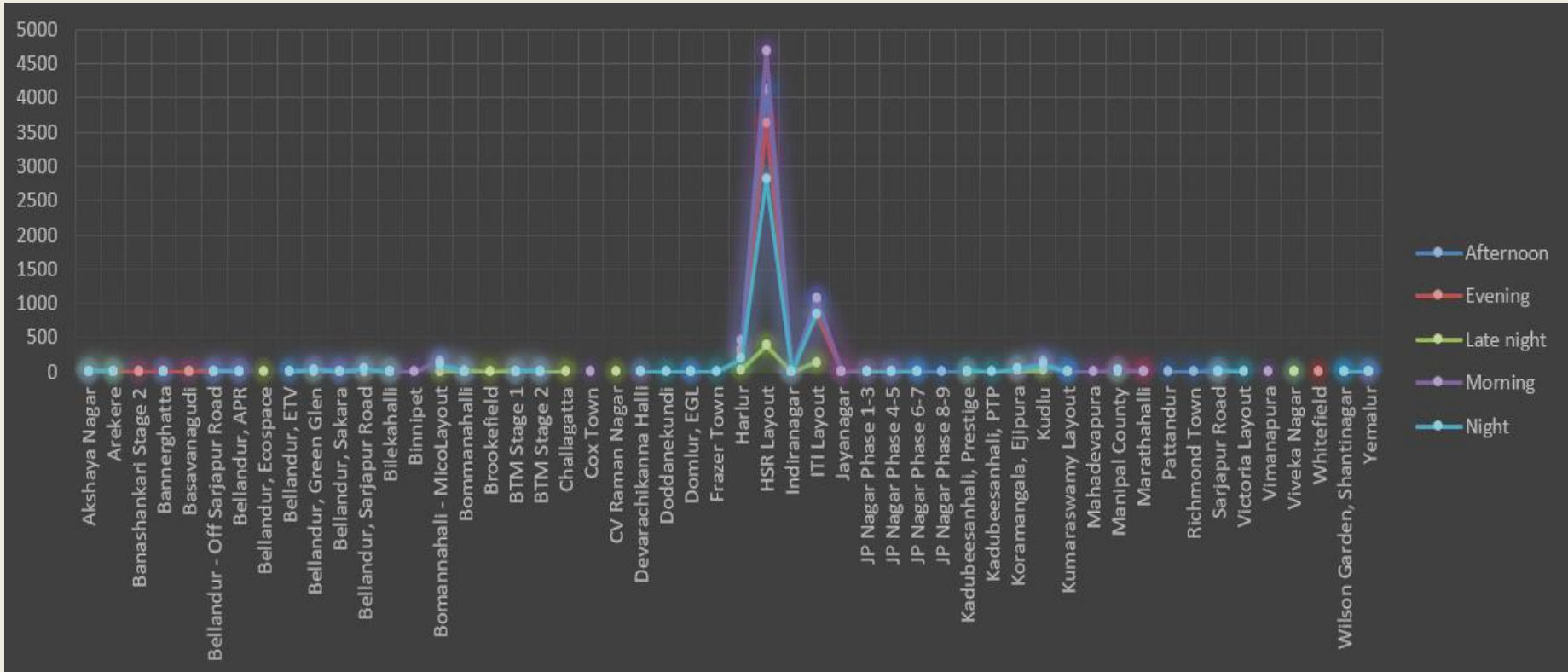
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Course: Data Analytics + Python
Batch: 202407

ORDER LEVEL ANALYSIS

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

ORDER LEVEL ANALYSIS

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- Areas like **HSR Layout, ITI Layout** and **Harlur** have shown consistently higher activities in all time slots (however the numbers are varying). We can therefore conclude that these are the key delivery zones, likely due to more commercial activity and high population in these areas.

- **Afternoons** and **Mornings** see the **highest order distribution** volume across most areas.

- Overall activity is **low during Late Nights**, but certain areas like HSR Layout and ITI Layout maintain steady demand.

ORDER LEVEL ANALYSIS

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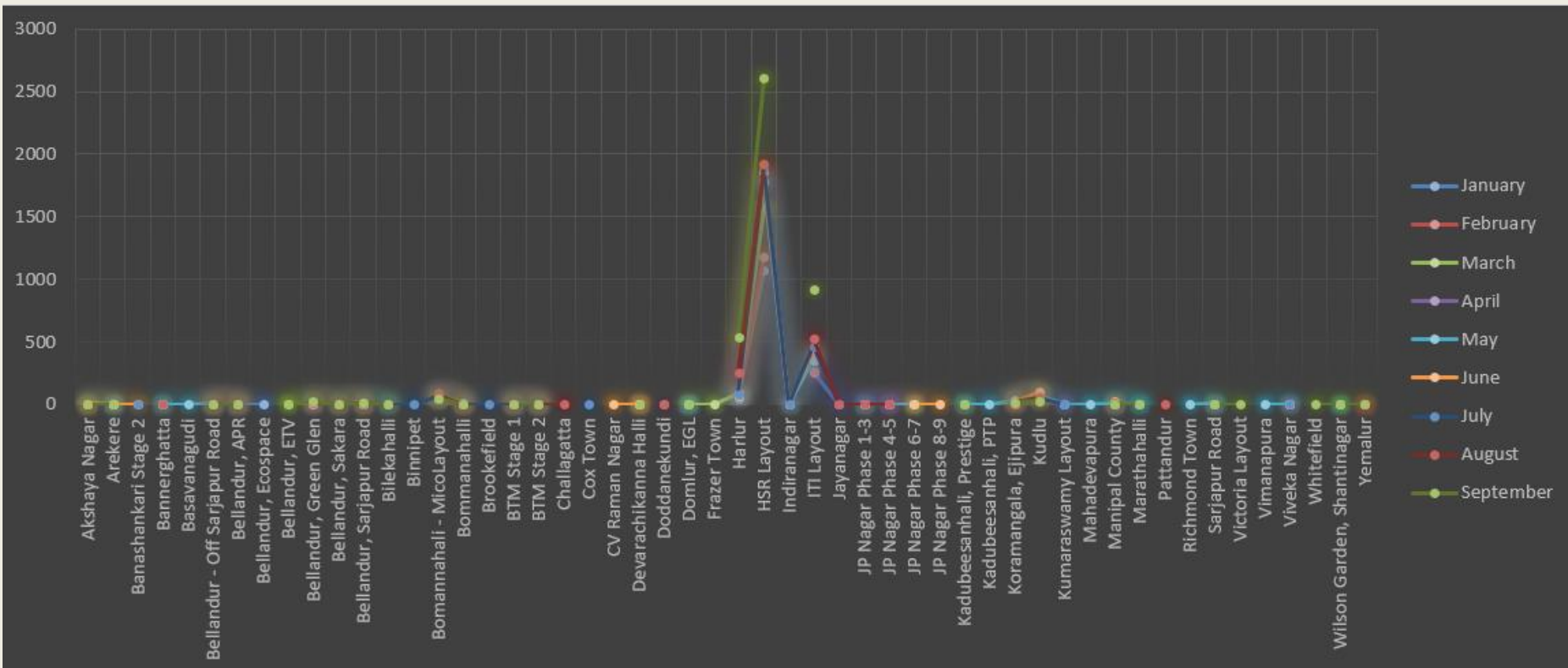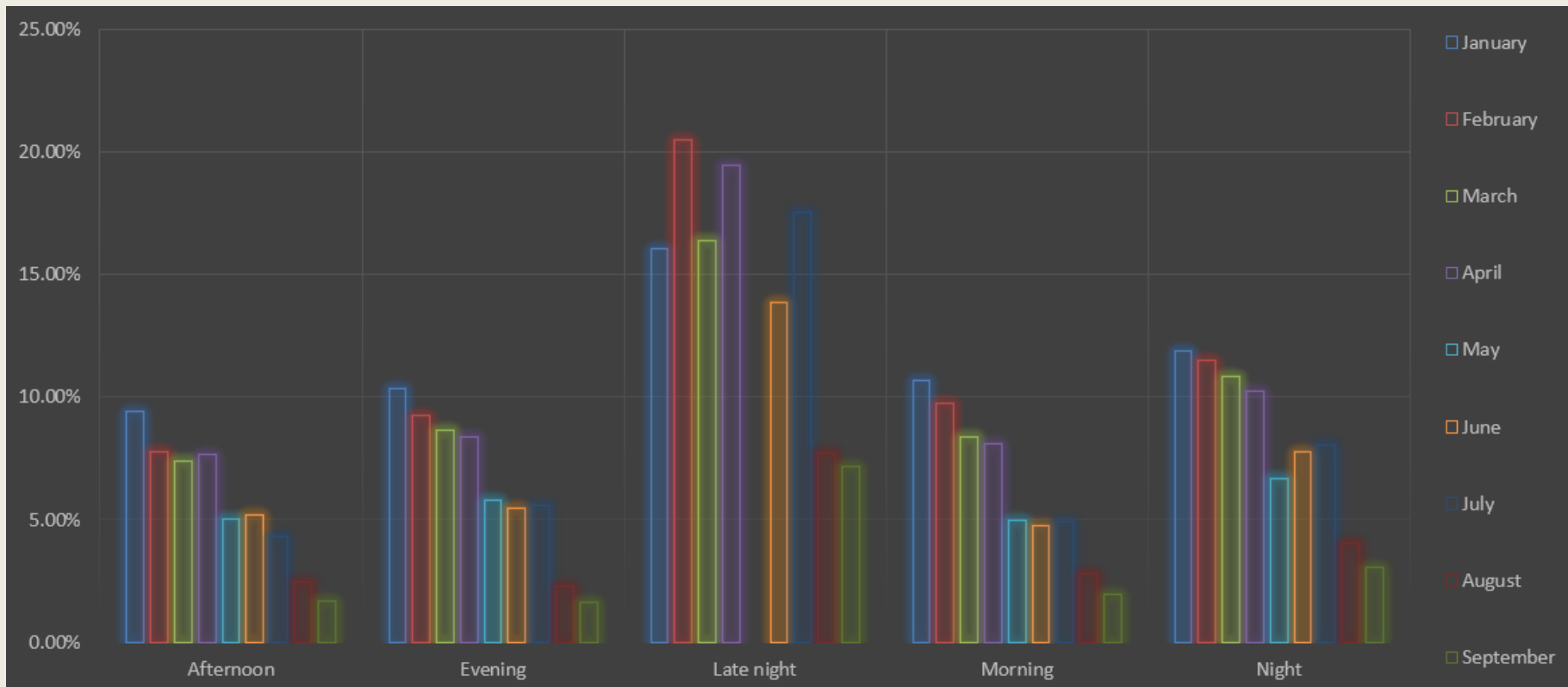
ORDER LEVEL ANALYSIS

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

- **HSR Layout** shows the most significant absolute increase in orders from January to September, with an increase of **1,534 orders**.

- **ITI Layout** and **Harlur** also show substantial increases in order volume, with **653** and **486 orders** respectively.

- Some areas like **Bomannahali - MicoLayout** have seen a decrease in orders, indicating a potential shift in demand or competition in these areas.

ORDER LEVEL ANALYSIS

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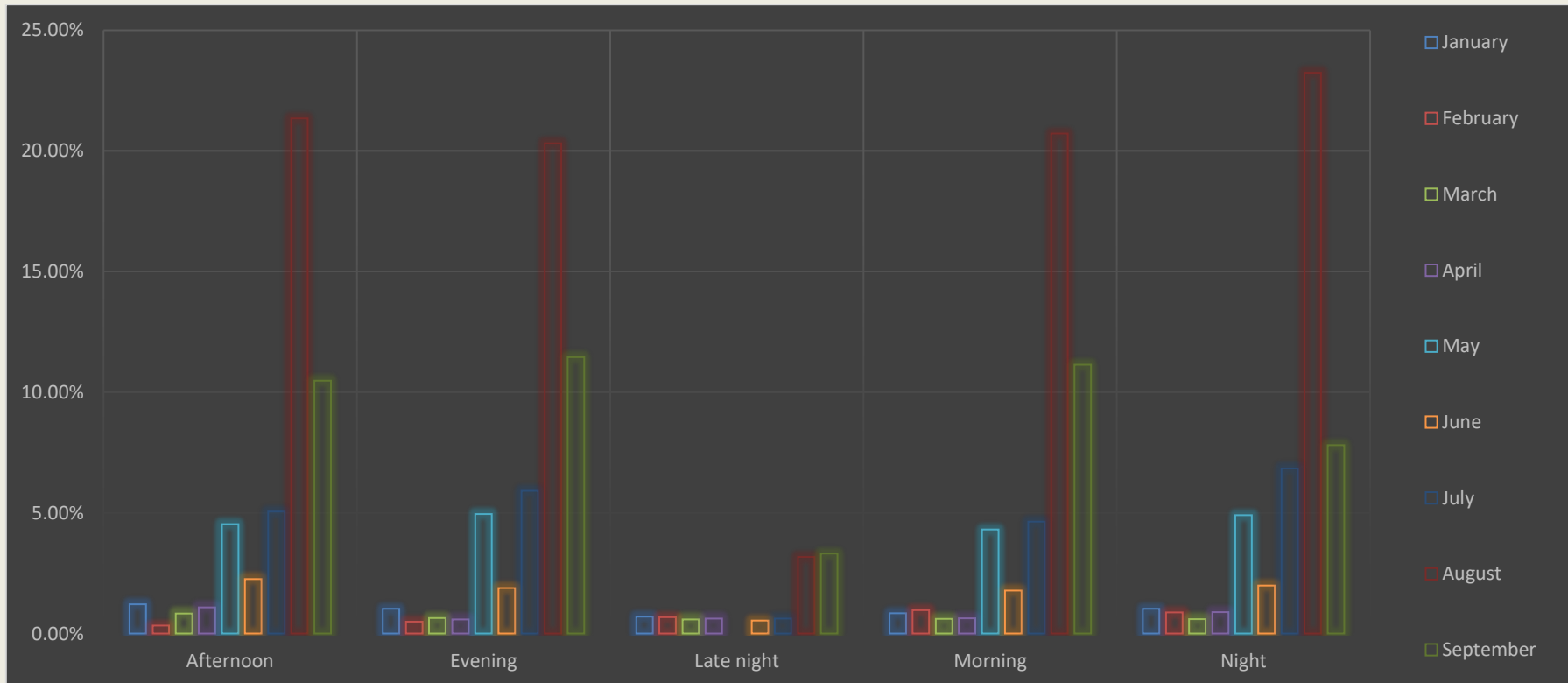
ORDER LEVEL ANALYSIS

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

- **Late Night Slot** has the highest percentage of delivery charges relative to product amount across all months, with a grand total of **14.15%**.

- The **Night Slot** follows with **7.75%.**

- **Afternoon, Morning,** and **Evening** slots have lower percentages, each around **5-6%**.

- The overall average across all slots and months is **5.86%**.

ORDER LEVEL ANALYSIS

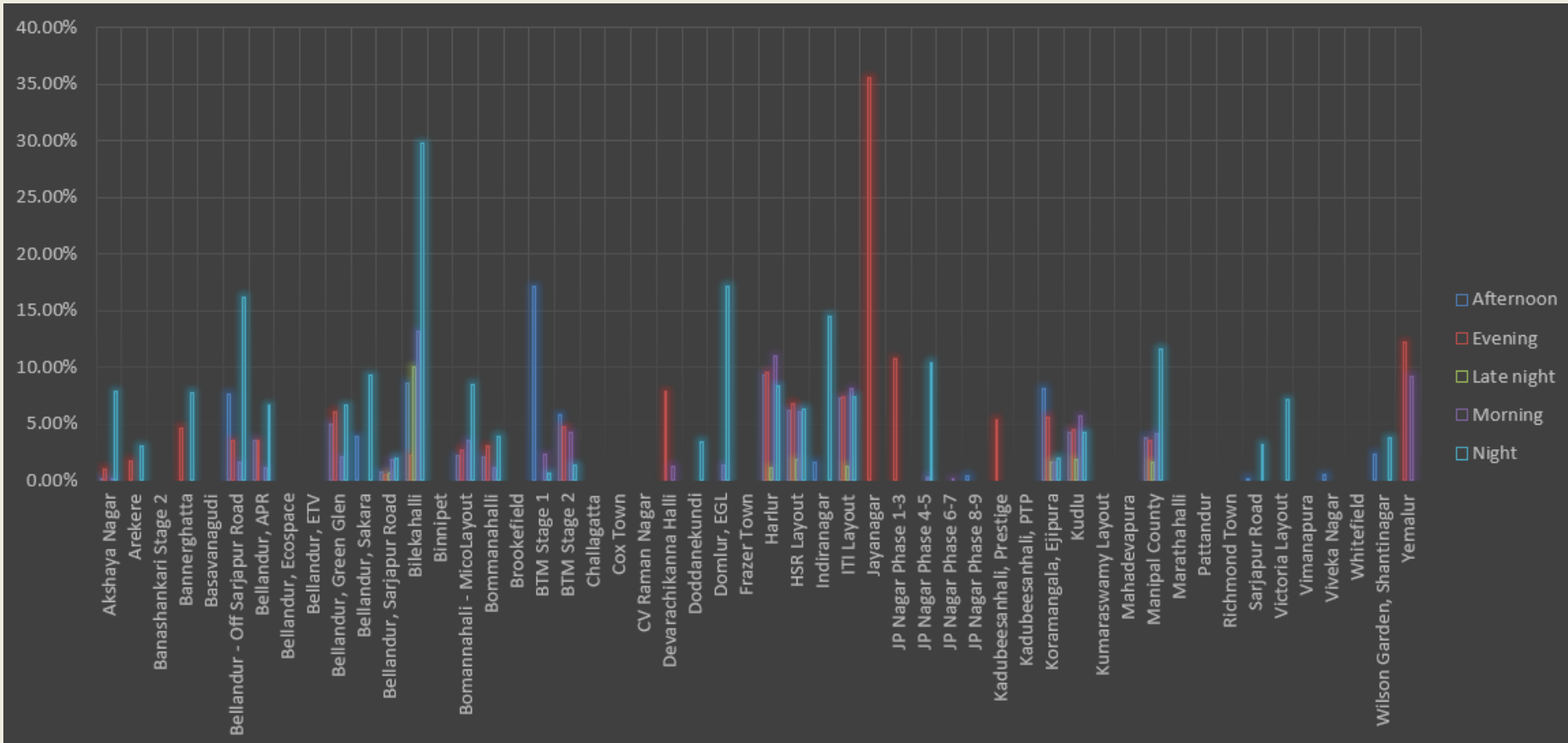**4. Calculate discount as a percentage of product amount at slot and month level.**

ORDER LEVEL ANALYSIS

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

- **Night** Slot has the highest discount percentage overall at **6.53%.**

- **Late Night Slot** has the lowest discount percentage overall at **1.50%**.

- The **Afternoon Slot** sees significant discount increases in later months (August and September) with a grand total of **6.23%**.

- **August** has the highest average discount percentage of **12.81%**. On the contrary, **February-April** exhibit the lowest average discount rates. (**0.6%-0.8%**)

- Collectively, **May, July, and August** contribute to over **60%** of the total discounts recorded.

ORDER LEVEL ANALYSIS

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

ORDER LEVEL ANALYSIS

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- **Bilekahalli** consistently shows the highest discounts across all slots, particularly during the night (29.73%) and late night (10%).

- **Jayanagar** had the highest discount percentage in the evening slot (35.61%), indicating heavy discounting during this time.

- Several areas, including **Banashankari Stage 2, Basavanagudi, Brookefield,** and **Frazer Town**, showed little to no discount activity across all slots.

- **BTM Stage 1** and **HSR Layout** had notable discount percentages in the afternoon and morning slots.

- Discount percentages are generally lower during late-night hours across most areas, except for **Bilekahalli** and **Harlur**, which still offered significant discounts.
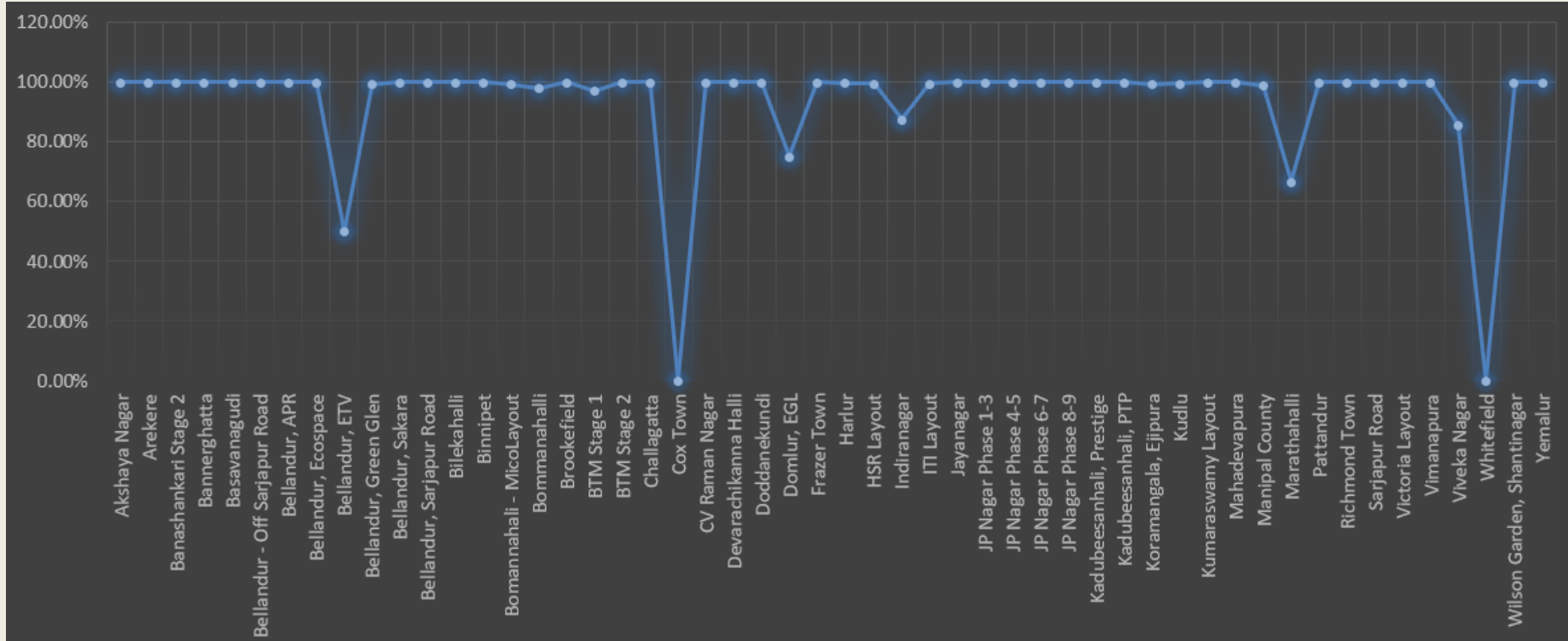
COMPLETION RATE ANALYSIS

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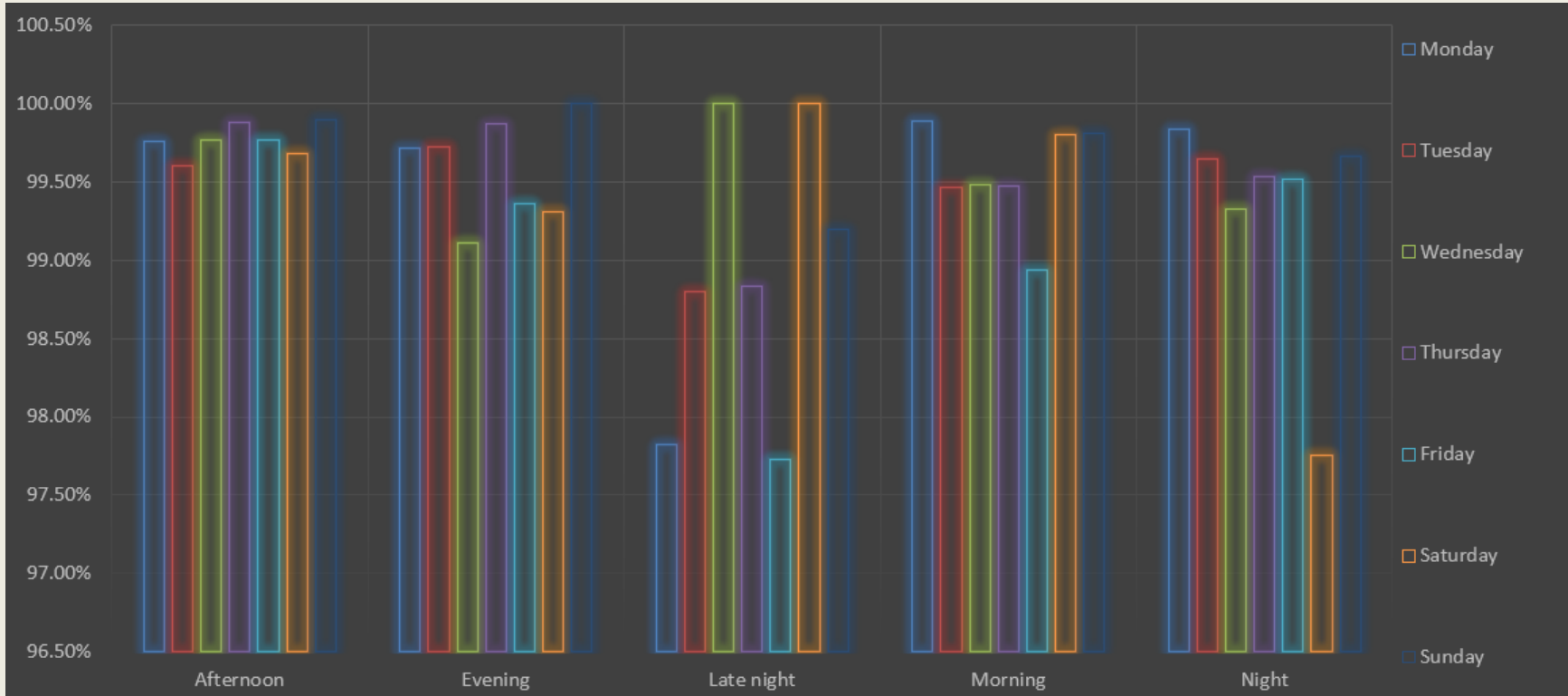
COMPLETION RATE ANALYSIS

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

- **Sunday** has the highest overall completion rate with evening time reaching **100%**

- **Late night** shows variability with some days like **Wednesday and Saturday reaching 100%,** but other days particularly **low rates like Monday and Friday.**

- The **"Afternoon"** time slot has the highest average completion rate (**99.77%**) across all days.

COMPLETION RATE ANALYSIS

7. Calculate completion rate at drop area level.

COMPLETION RATE ANALYSIS

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- Most areas, such as **Akshaya Nagar, Arekere, Bannerghatta, Basavanagudi, Bilekahalli**, and many others, have a **100% completion rate**, showcasing flawless order fulfillment.

- Areas like **Bellandur, Green Glen (99.25%)**, **Bomannahali - MicoLayout (99.27%)**, **Harlur (99.69%)**, and **ITI Layout (99.59%)** are slightly below perfect but still show strong performance.

- **Cox Town (0%)** and **Whitefield (0%)** have a **0% completion rate**

COMPLETION RATE ANALYSIS

8. Completion rate at number of products ordered level.
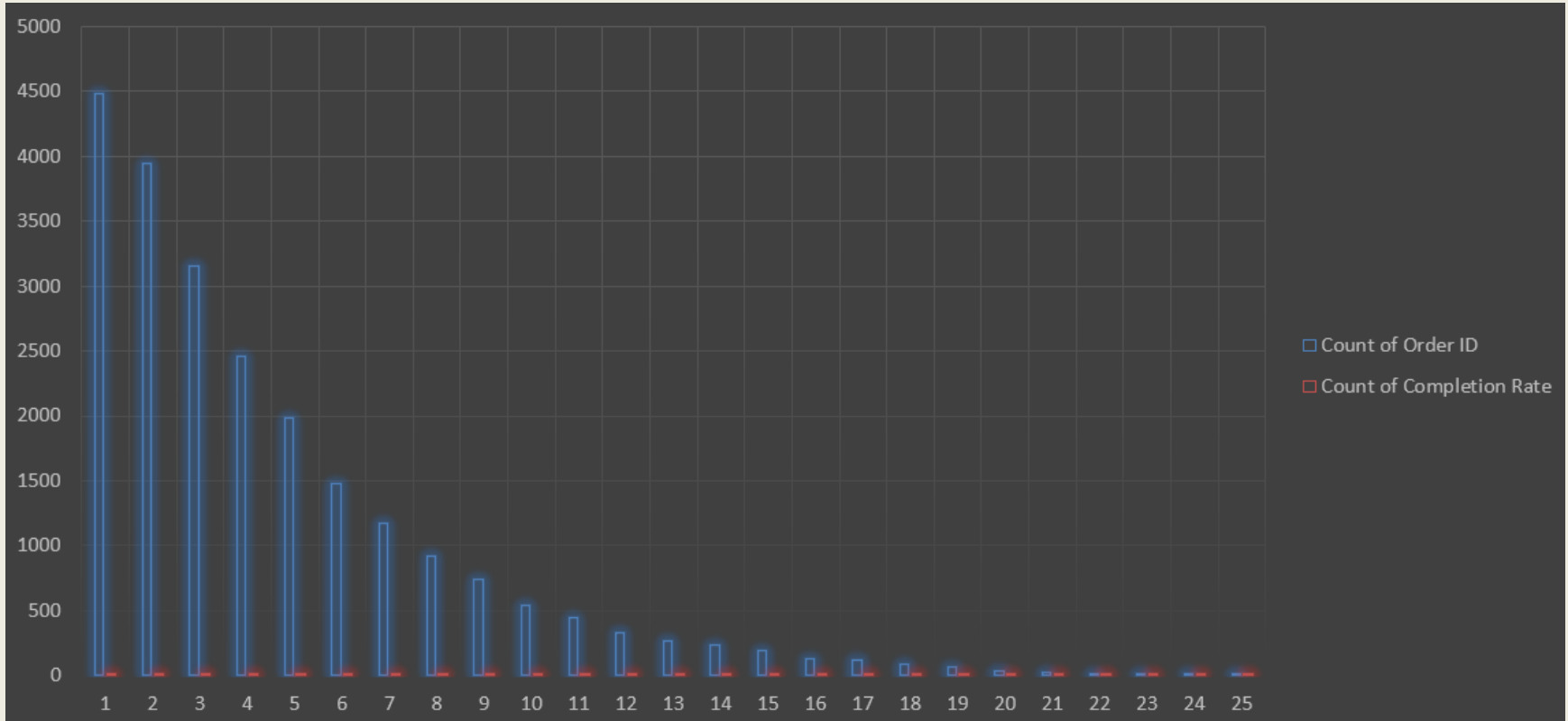
COMPLETION RATE ANALYSIS

8. Completion rate at number of products ordered level.

- The completion rate is impressively consistent across most order sizes, with the majority of them being at or very close to **100%**

- Larger order sizes maintain a very high completion rate (ranging from **99.87% to 100.04%**)

- A few order sizes, such as **1174 products (99.59%)** and **737 products (99.49%)**, have slightly lower completion rates

- Order sizes from **1 to 25 products** tend to show a completion rate of **100.45%**

COMPLETION RATE ANALYSIS

9. Give your analysis on any pattern you observe in the completion rate.
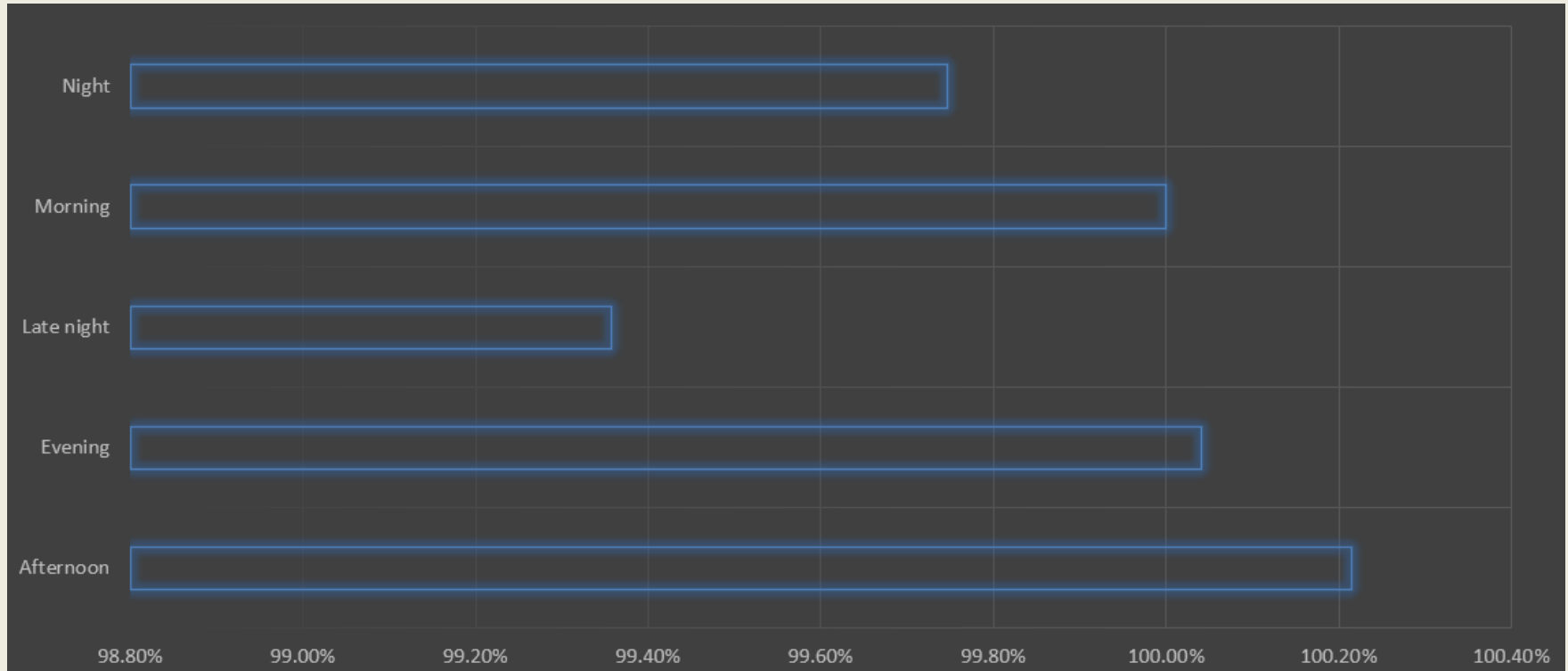
COMPLETION RATE ANALYSIS

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

- All time slots show a completion rate close to or above 99%, which indicates a consistently high level of order fulfillment efficiency

- The **Afternoon** slot has the highest completion rate at **100.22%**.

- The **Evening** and **Morning** slots both have completion rates at or just above **100%**, indicating very reliable performance during these times.

- The **Late Night** slot has the lowest completion rate at **99.36%**.

CUSTOMER LEVEL ANALYSIS

10. Identify Completion rate at source level.

- **Organic Lead**s had the highest completion rate, **29.29%**.

- **Google** emerged as the second most effective source, accounting for **22.43%** of completion orders.

- **Social Media** has a significant effect where **Snapchat (11.09%)** has the lowest impact, followed by **Instagram (12.19%)** and **Facebook (11.47%)**.

- **Offline marketing** also drove some percentage of completions, **12.53%**.
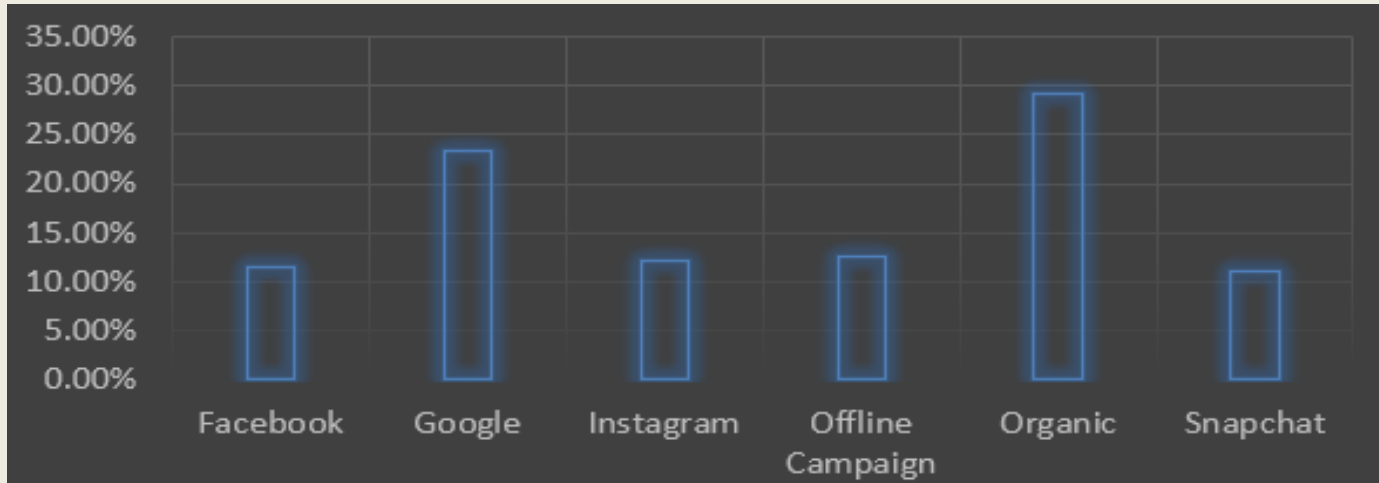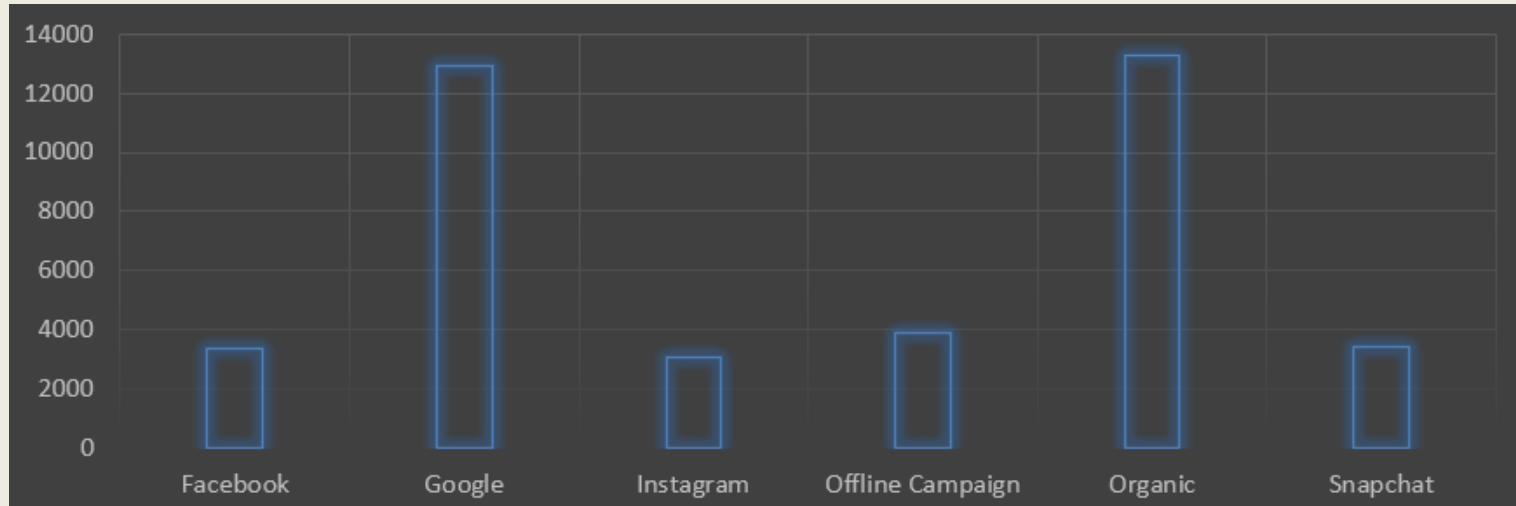
CUSTOMER LEVEL ANALYSIS

11. Calculate LTV for every customer.

- The dataset includes **1,953,036,197** total purchases, with **3,750** distinct individual consumers linked to unique user IDs.

- The highest-priced purchase was attributed to user ID **"APQ2413449,"** amounting to **6,397,125**. This exemplifies the significant contribution of high-value clients to the company's overall revenue.

- **Each client contributes an average purchase value of 52,009**, representing the mean revenue generated by every customer throughout their engagement with the company.

CUSTOMER LEVEL ANALYSIS

**12. Calculate aggregated LTV at customer acquisition source level.**

- **Organic** source acquired customers have the highest average LTV at **13,291.98**.

- The second highest LTV is from **Google**, with an average of **12,948.84**.

- **Offline Campaigns** have moderate LTV average of **3,874.45**.

- **Facebook, Instagram and Snapchat** have lower average LTVs, **3,342.53**, **3,075.14**, and **3,395.82** respectively.

CUSTOMER LEVEL ANALYSIS

**13. Calculate aggregated LTV at acquisition month level.**

- The highest aggregated LTV was achieved in **September**, with a total of **28,174,665**.

- Both **March** and **July** also saw high aggregated LTVs, with **25,617,722** and **24,929,098**, respectively.

- The lowest aggregated LTV was in **May**, with a total of **16,728,973**.

- The other months, such as **January**, **February**, **April**, **June**, and **August**, show relatively consistent LTVs.
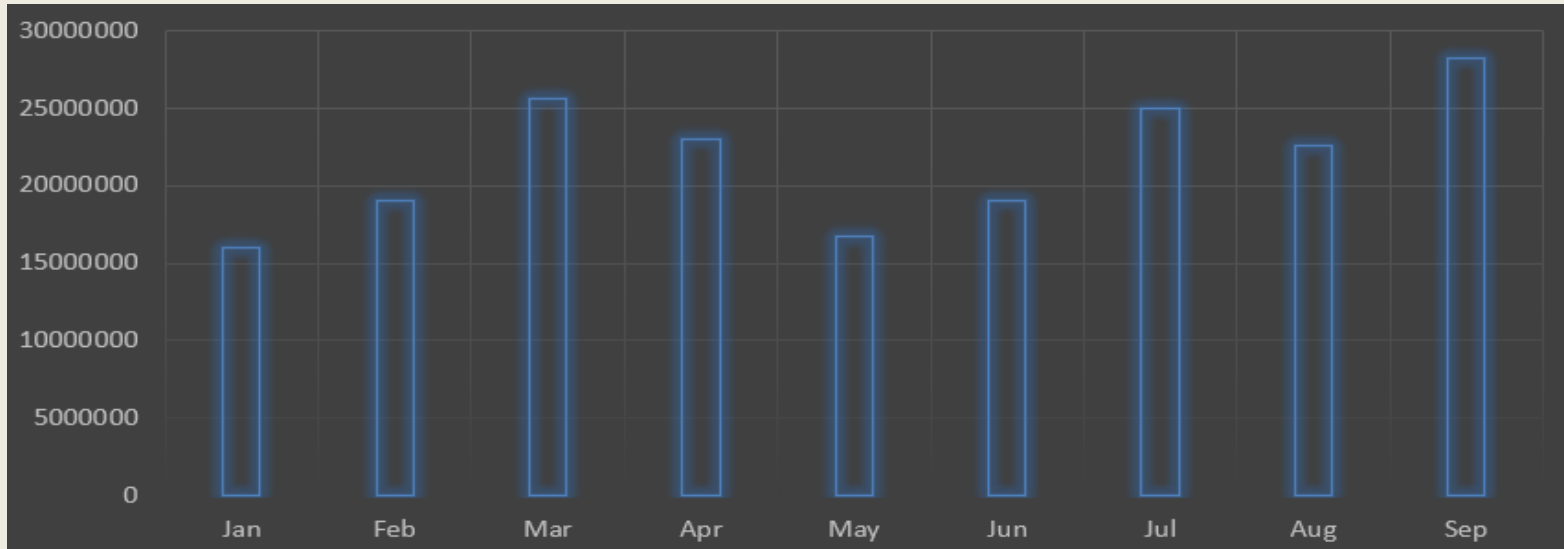
CUSTOMER LEVEL ANALYSIS

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

- **Snapchat** and **Google** have the highest average revenue per order, at **363.52 and 363.05**, respectively. **Instagram** has the lowest average revenue per order at **322.85.**

- **Offline campaigns (346.72)** yield an average revenue per order that's slightly below Facebook's.

- The average revenue from **organic sources (343.86)** is slightly lower than the average across all channels.
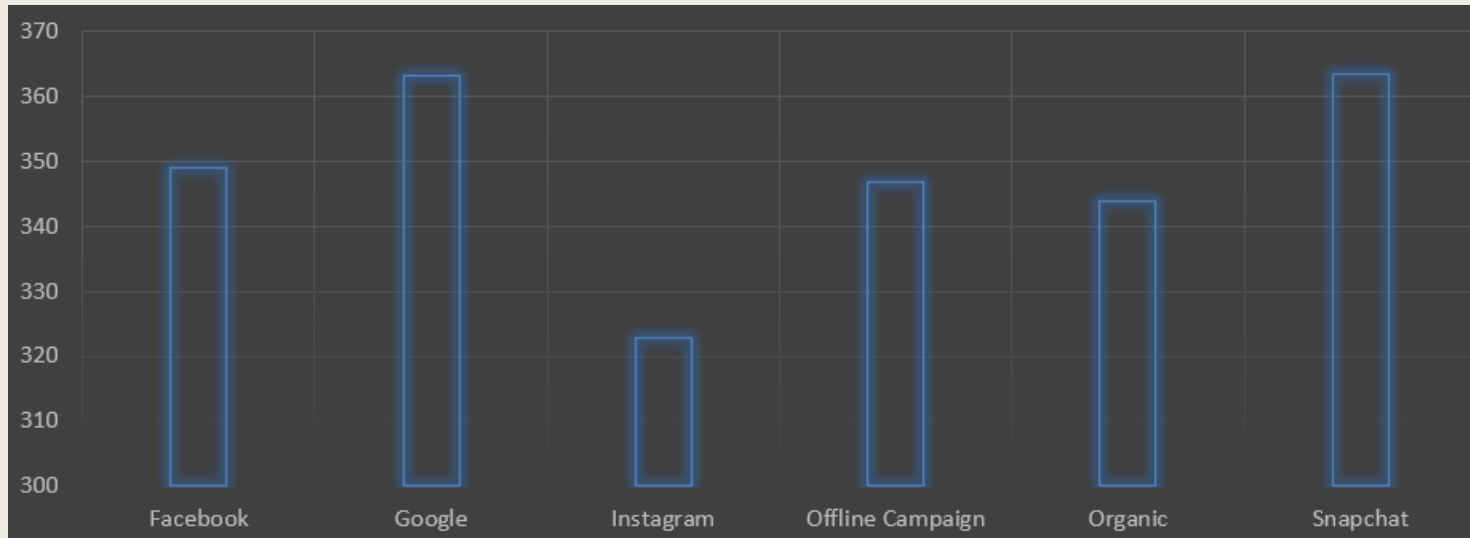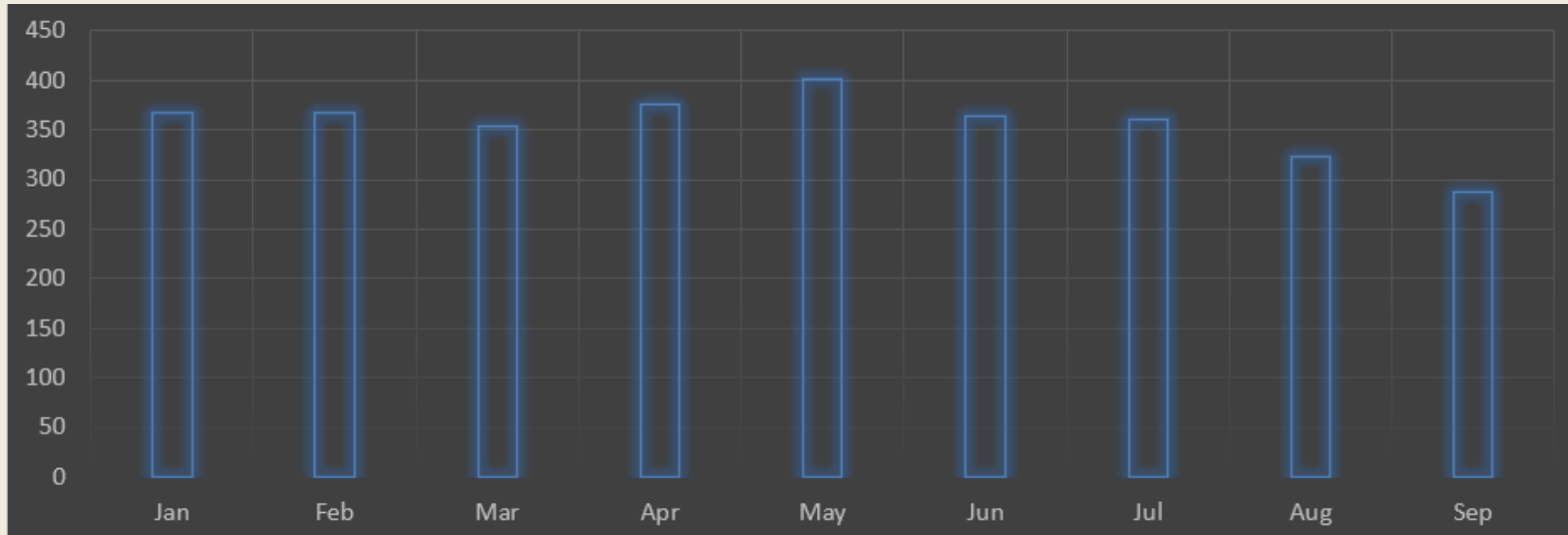
CUSTOMER LEVEL ANALYSIS

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

- **May (401.83)** stands out with the highest average revenue per order.

- **September (286.69)** has the lowest average revenue per order.

- Intermediate months like April, June, July and August showing relatively high values.

CUSTOMER LEVEL ANALYSIS

16. Is there any pattern in order rating across slots, number of items placed, delivery charges, discount.

- Rating is **almost same** across all **slots** (slightly higher in mornings and slightly low during late night).

- Rating is higher for orders with **more number of products**.

- Rating is **usually high** with some expectations where average rating has fallen to 1.00. High frequency of 5.00 rating shows positive feedback.

- Rating is mostly higher in orders with **maximum discounts** offered.

DELIVERY ANALYSIS

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

- Delivery times are **slower in May** and **faster in February**, with significant variations across other months.

- Some areas experience significantly **longer delivery times**, such as **Mahadevapura**, while others have **faster delivery times**, like **Bellandur, Ecospace, and HSR Layout**.
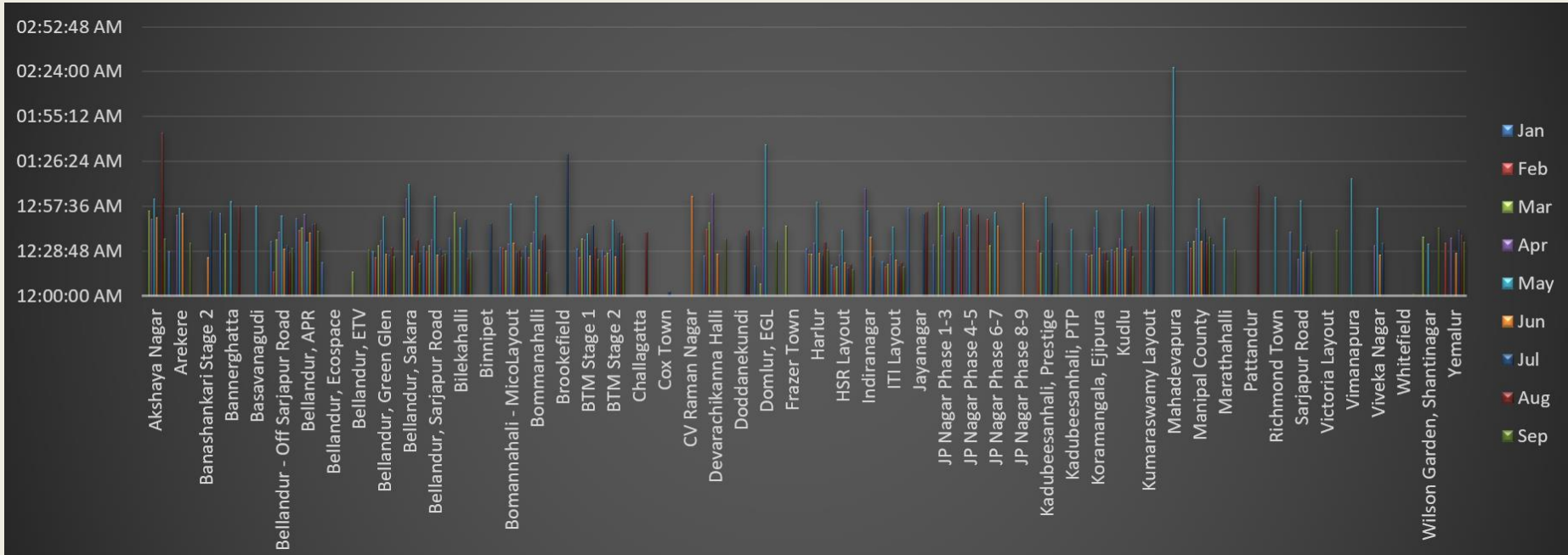
DELIVERY ANALYSIS

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.
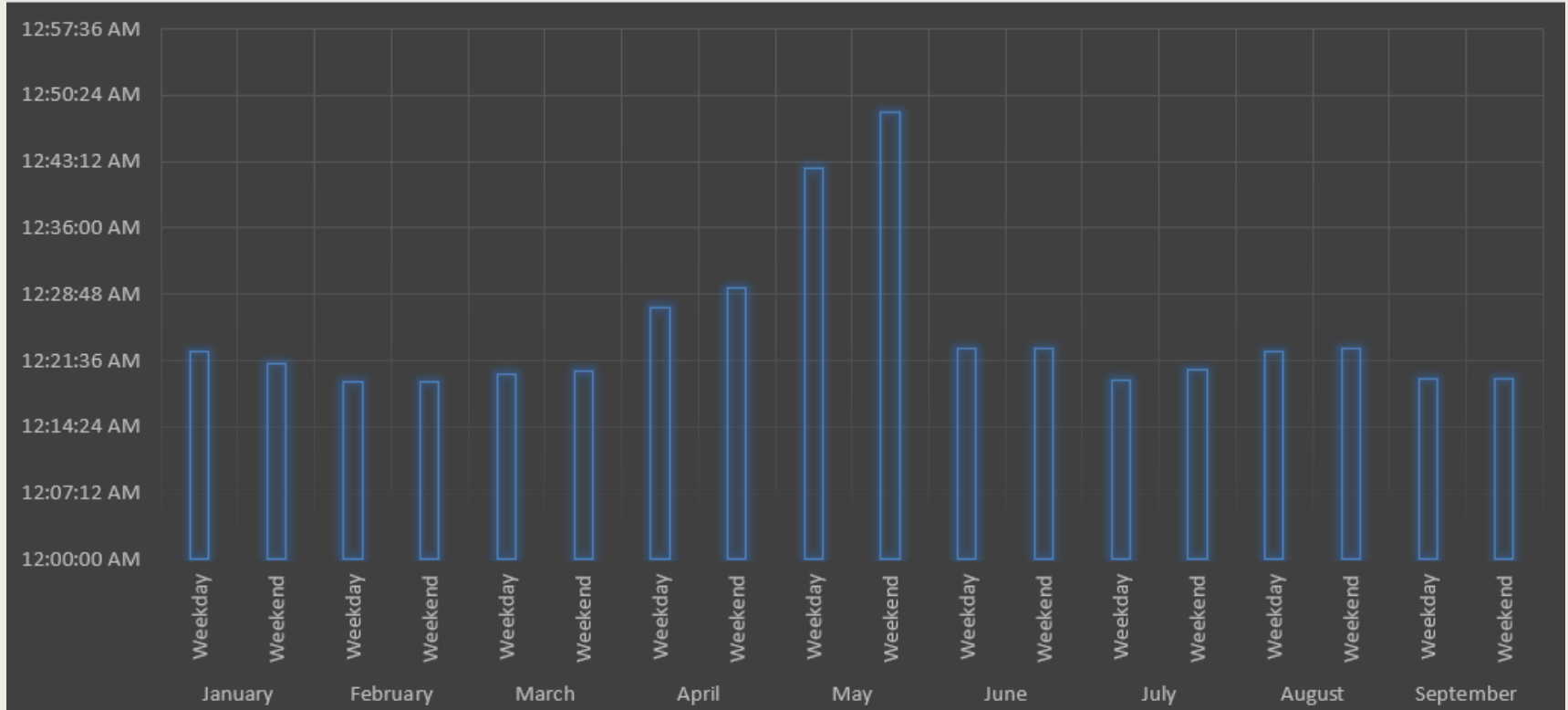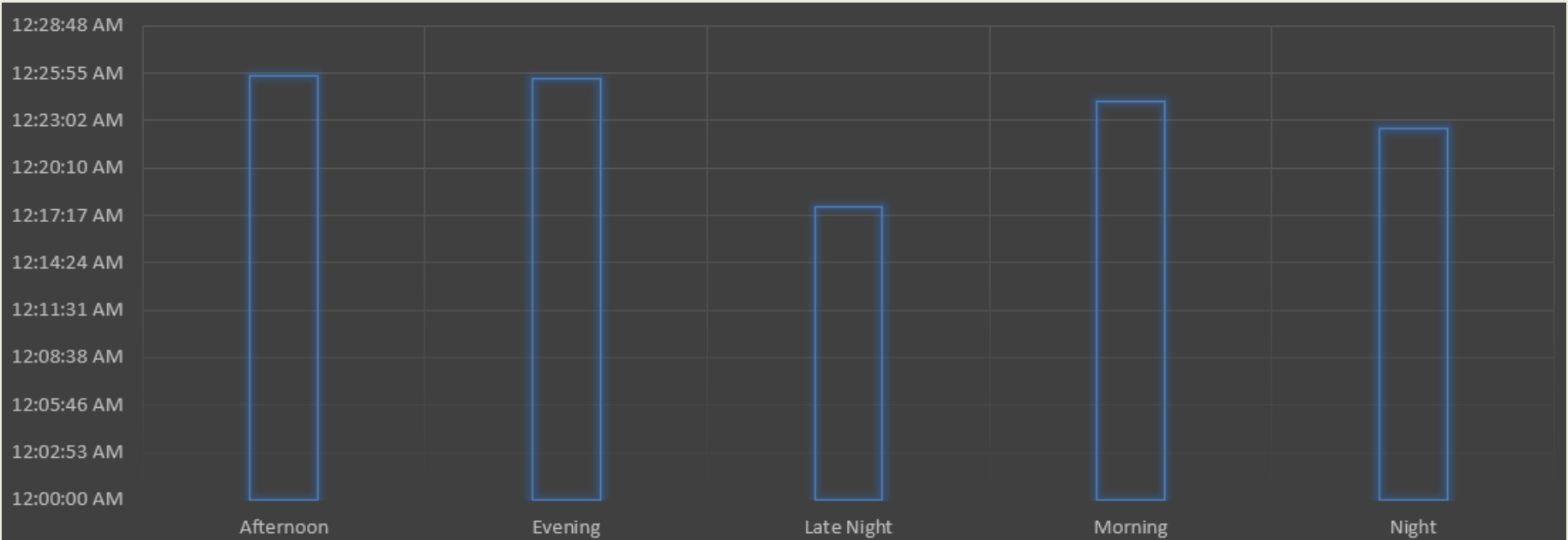
DELIVERY ANALYSIS

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.

- **May** has the **longest** average delivery times, while **February** has the **shortest**, while delivery times are fairly stable across different months.

- **Weekends** tend to have slightly **faster average delivery times** than weekdays. However, this trend varies by month
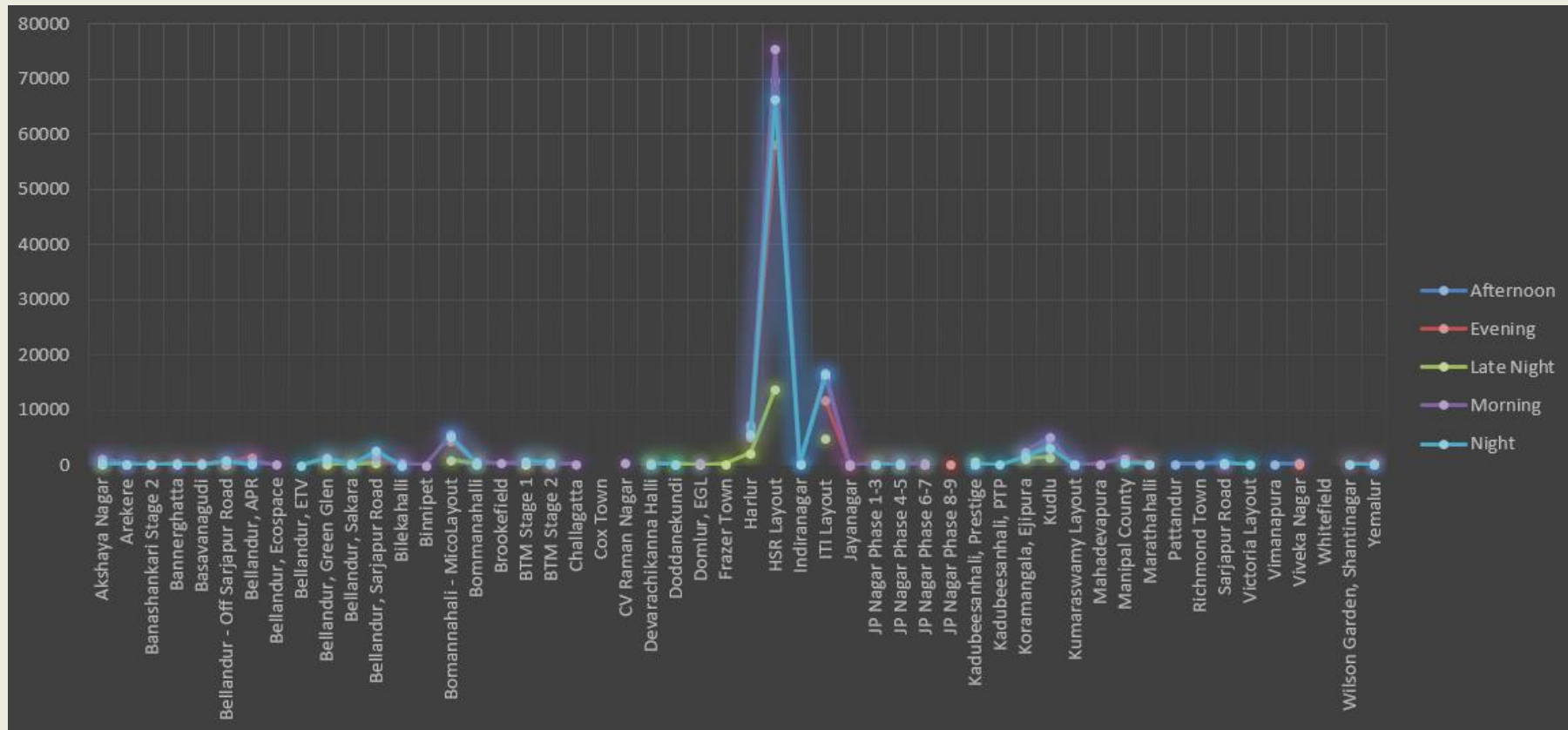
DELIVERY ANALYSIS

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

- The **Late Night** slot has the **fastest** average delivery time.

- The **Afternoon** slot has the **slowest** average delivery time.

- **Evening, Night,** and **Morning** slots have average delivery times close to the overall average.

DELIVERY ANALYSIS

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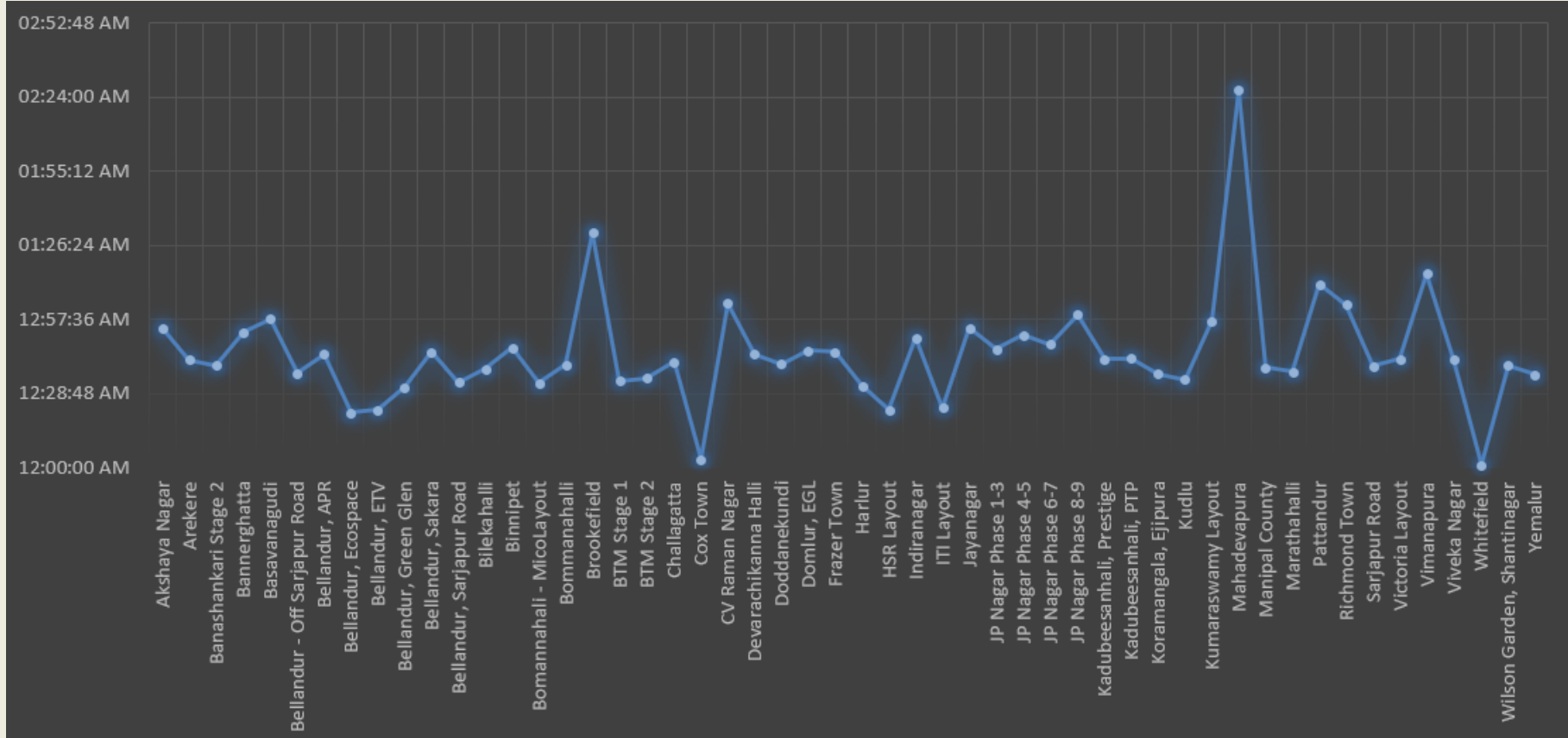
DELIVERY ANALYSIS

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

- Areas like **HSR Layout** and **ITI Layout** have exceptionally **high delivery charges**, whereas other areas like **Victoria Layout** and **Pattandur** have much **lower** totals.

- **Mornings** have the **highest total delivery charges** suggesting that morning deliveries are very common across most areas.

- **Late Nights** have the **lowest** total which might be due to a combination of reduced demand and fewer businesses operating late at night.

DELIVERY ANALYSIS

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

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- HSR Layout, ITI Layout, Bellandur Green Glen have earlier average delivery times.

- Mahadevapura, Vimanapura, Pattandur have significantly late delivery times.

- Whitefield and Cox town have the earliest average delivery time.

THANK YOU