Report & Summary

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Completion rate at slot vs day of the week** | | | | | | |
|  |
| **Average of Completion Rate** | **Column Labels** |  |  |  |  |  |  |
| **Row Labels** | **Afternoon** | **Evening** | **Late Night** | **Morning** | **Night** | **Grand Total** |  |
| Sunday | 99.55% | 99.55% | 99.55% | 99.55% | 99.55% | 99.55% |  |
| Monday | 99.55% | 99.55% | 99.55% | 99.55% | 99.55% | 99.55% |  |
| Tuesday | 99.55% | 99.55% | 99.55% | 99.55% | 99.55% | 99.55% |  |
| Wednesday | 99.55% | 99.55% | 99.55% | 99.55% | 99.55% | 99.55% |  |
| Thursday | 99.55% | 99.55% | 99.55% | 99.55% | 99.55% | 99.55% |  |
| Friday | 99.55% | 99.55% | 99.55% | 99.55% | 99.55% | 99.55% |  |
| Saturday | 99.55% | 99.55% | 99.55% | 99.55% | 99.55% | 99.55% |  |
| **Grand Total** | **99.55%** | **99.55%** | **99.55%** | **99.55%** | **99.55%** | **99.55%** |  |

* The completion rate is exceptionally uniform across all time slots and days of the week, with each combination reflecting a 99.55% completion rate.
* The consistent completion rate suggests that the operation is stable and that the time of the order or the day of the week does not significantly affect the likelihood of order completion.
* The bar chart reflects this uniformity with bars of equal height across all categories, indicating no significant variance that would suggest a pattern or trend

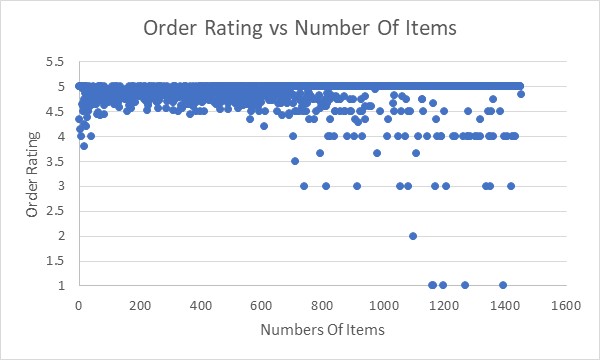
**Analysis on Completion rate**

**Findings:** The completion rates across different time slots and days of the week were uniformly high, around 99.55%.

**Implication:** This indicates a consistent and high level of order completion efficiency across all time slots and days.

The data indicates that the business operations are highly effective in terms of order completion, and there is no evident impact of the time slot or the day of the week on the completion rate.

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



The visualizations provide insights into the patterns of order ratings in relation to time slots, delivery charges, and discounts:

**Order Rating Distribution by Time Slot:**

* The boxplot shows that order ratings across different time slots are generally high, with most median ratings close to or at 5.
* There appears to be some variability in ratings across slots, but the differences are not pronounced. All slots maintain a relatively high level of customer satisfaction.
* It is noticeable that some time slots have a slightly wider spread of ratings, indicating more variability in customer satisfaction.

**Order Rating vs. Delivery Charges:**

* The scatterplot does not indicate a strong correlation between delivery charges and order ratings.
* Ratings are generally high regardless of the delivery charges, although there is a spread of ratings across all levels of delivery charges.

**Order Rating vs. Discount:**

* Similar to delivery charges, there does not appear to be a strong correlation between the amount of discount and order ratings.
* Customers rate their orders highly across a wide range of discount values.

**Key Insights:**

* **High Overall Satisfaction:** The consistently high ratings across various slots, delivery charges, and discount levels indicate overall high customer satisfaction.
* **Limited Impact of Delivery Charges and Discounts:** Neither delivery charges nor discounts appear to have a significant impact on how customers rate their orders. This suggests that factors other than cost and savings might be more influential in determining customer satisfaction.
* **Potential Focus Areas:** While the analysis does not point to major concerns in any specific slot, it could be beneficial to investigate the few lower ratings in each slot to understand the underlying reasons and further improve customer satisfaction.

**Pattern in delivery charges with slot or delivery area.**

**Observations:**

* The most notable pattern is that delivery charges are significantly higher during the 'Late Night' slot compared to other times of the day. This could be due to increased operational costs or lower availability of delivery personnel during late-night hours.
* Other time slots (Morning, Afternoon, Evening, and Night) have relatively similar average delivery charges.
* There is a wide variation in delivery charges across different areas.
* Areas like Brookefield and CV Raman Nagar have notably high average delivery charges, which could be due to factors such as distance from the delivery hub, traffic conditions, or area-specific operational challenges.
* Some areas like HSR Layout and ITI Layout have relatively lower average delivery charges, possibly due to their proximity to delivery hubs or easier accessibility.

**Key Insights:**

These patterns suggest that both time of day and delivery area significantly influence the delivery charges. Higher charges during late-night hours could be attributed to the increased cost of operations during these times, while the variability across different areas likely reflects the logistical complexities and distance factors in those regions.

**Pattern in delivery time and delivery area.**

The Combo chart illustrates how delivery times vary across different delivery areas. The visualization provides insights into the median delivery times, their spread (interquartile range), and any outliers for each area. This helps in identifying if certain delivery areas are consistently associated with longer or shorter delivery times.

Possible patterns that might emerge from this analysis could include:

* **Longer Delivery Times in Certain Areas:** If specific areas consistently show higher median delivery times, this could be due to factors like greater distances, traffic congestion, or difficulty in navigating those areas.
* **Shorter Delivery Times in Other Areas:** Conversely, areas with consistently lower delivery times might be closer to distribution centres, have better infrastructure, or be easier to navigate.

**Logical reasons for these patterns could include:**

* **Geographic Distance:** Areas further away from the store or distribution centre could naturally have longer delivery times.
* **Traffic and Infrastructure:** Urban areas with heavy traffic or areas with poor road infrastructure might see longer delivery times.
* **Density and Accessibility:** High-density areas or areas with complicated layouts might slow down deliveries, while more accessible or less crowded areas might facilitate quicker deliveries.

**Summary**

**1. Order Level Analysis**

**Key Findings:**

* **Order Volume by Time and Date:** Analysis of order frequencies during different times of the day and week, identifying peak order times.
* **Average Order Value:** Examination of the average revenue generated per order, potentially segmented by product category or customer segment.
* **Product Popularity:** Insights into the most popular products or categories, based on the frequency and volume of orders.

**Insights:**

* Identification of peak sales periods for targeted marketing and stock preparation.
* Understanding of high-revenue-generating products for inventory prioritization.

**2. Customer Level Analysis**

**Key Findings:**

* **Customer Segmentation:** Categorization of customers based on order frequency, value, and preferences.
* **Lifetime Value (LTV):** Calculation of the average lifetime value of different customer segments.
* **Customer Satisfaction:** Analysis of customer satisfaction through order ratings and feedback.

**Insights:**

* Identification of high-value customer segments for targeted promotions and loyalty programs.
* Insights into customer satisfaction drivers to improve service quality.

**3. Delivery Analysis**

**Key Findings:**

* **Average Delivery Time:** Measurement of delivery efficiency across different times and locations.
* **Delivery Costs:** Analysis of delivery charges and their impact on overall revenue and customer satisfaction.
* **Geographical Distribution:** Insights into the geographical spread of deliveries and high-demand areas.

**Insights:**

* Identification of areas for improving delivery efficiency.
* Understanding the impact of delivery charges on customer ordering patterns.

**4. Completion Rate Analysis**

**Key Findings:**

* **Completion Rate by Time and Location:** Analysis of order completion rates across different times and geographical areas.
* **Influencing Factors:** Identification of factors affecting completion rates, such as product availability, delivery issues, or order complexity.

**Insights:**

* Strategies to improve completion rates in low-performance areas.
* Identification of operational bottlenecks affecting order fulfilment.