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Experiment	1

Aim:
Create basic charts using Tableau / Power BI / R / Python / D3.js to be performed on the dataset of Ecommerce field.
- Basic Plots - Bar chart, Pie chart, Histogram, Timeline chart, Scatter plot, Bubble plot
- Calculate Product wise sales, region wise sales or any other reports
- Write observations from each chart

Dataset :

Link : https://www.kaggle.com/datasets/mervemenekse/ecommerce-dataset

Columns:

1. **Order_Date**: The date the product was ordered.
2. **Aging**: The time from the day the product is ordered to the day it is delivered.
3. **Customer_id**: Unique id created for each customer.
4. **Gender**: Gender of customer.
5. **Device_Type**: The device the customer uses to actualize the transaction (Web/Mobile).
6. **Customer_Login_Type**: The type the customer logged in. Such as Member, Guest etc.
7. **Product_Category**: Product category
8. **Product**: Product
9. **Sales**: Total sales amount
10. **Quantity**: Unit amount of product
11. **Discount**: Percent discount rate
12. **Profit**: Profit
13. **Shipping_cost**: Shipping cost
14. **Order_Priority**: Order priority. Such as critical, high etc.
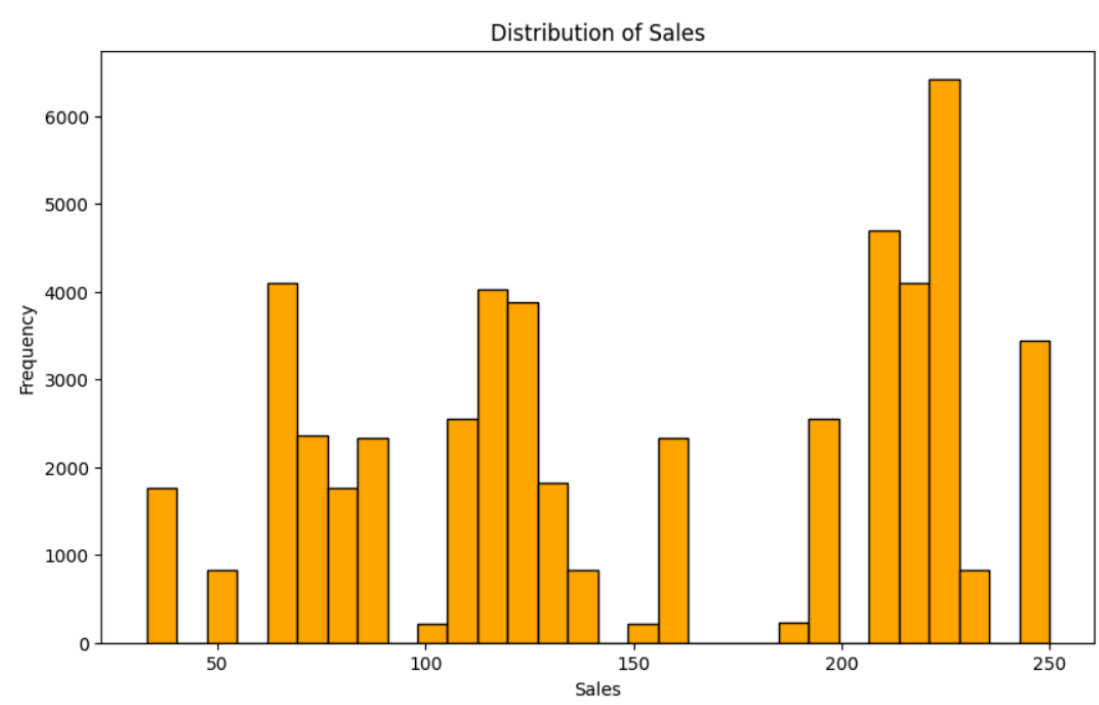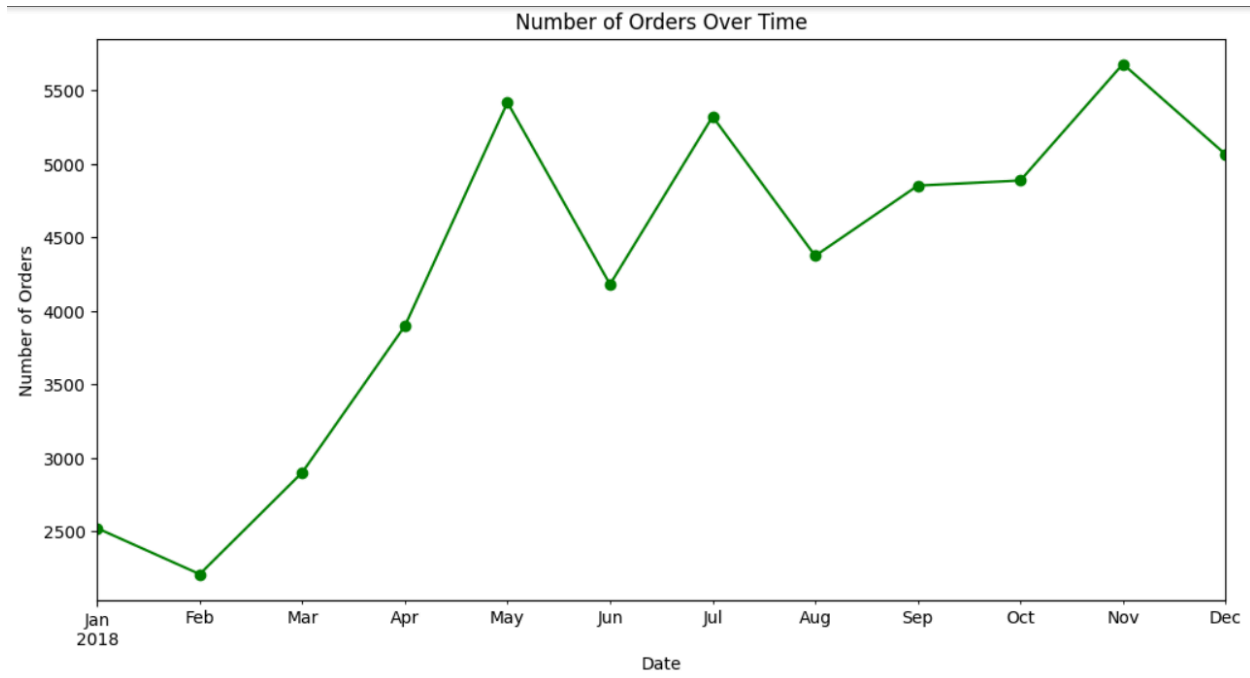15. **Payment_method**: Payment method

Plots:

Bar Chart :
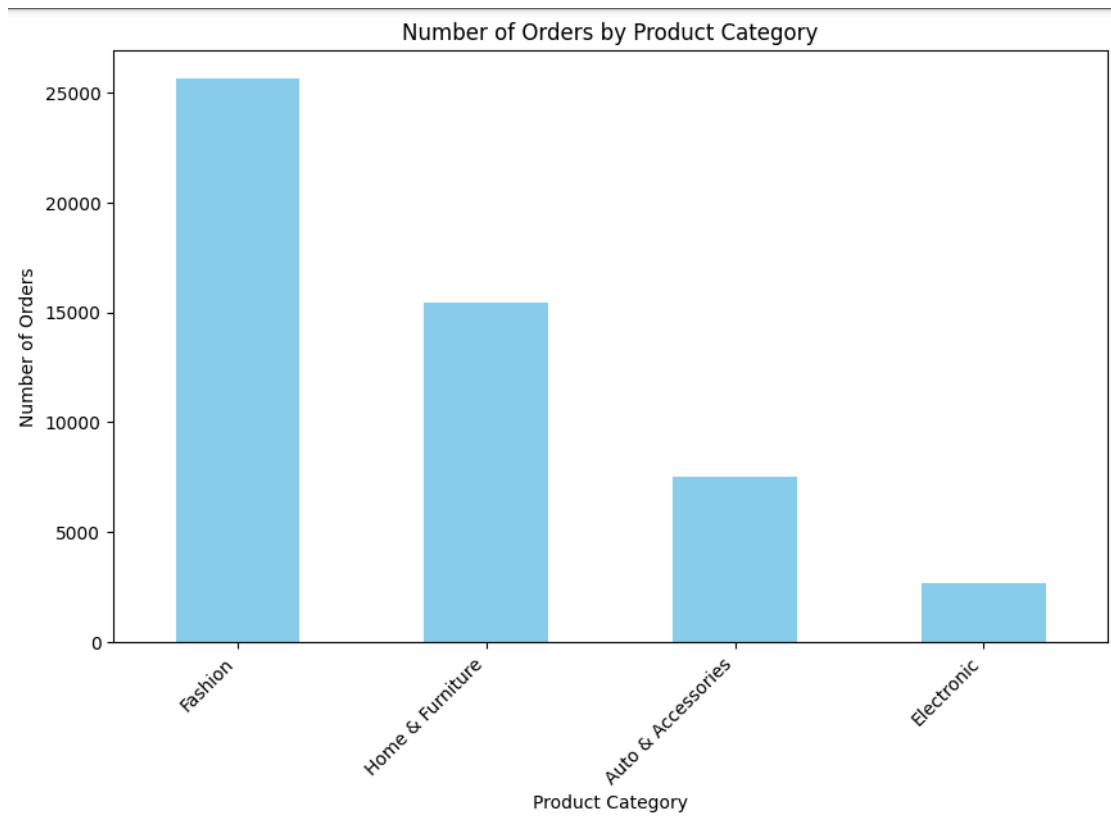
Insight : From the above chart we can see that the popular category is Fashion followed by Home and Furniture.

Histogram Plot:

Insight : Most of the sales have lower values suggesting that the high value sales are less frequent.
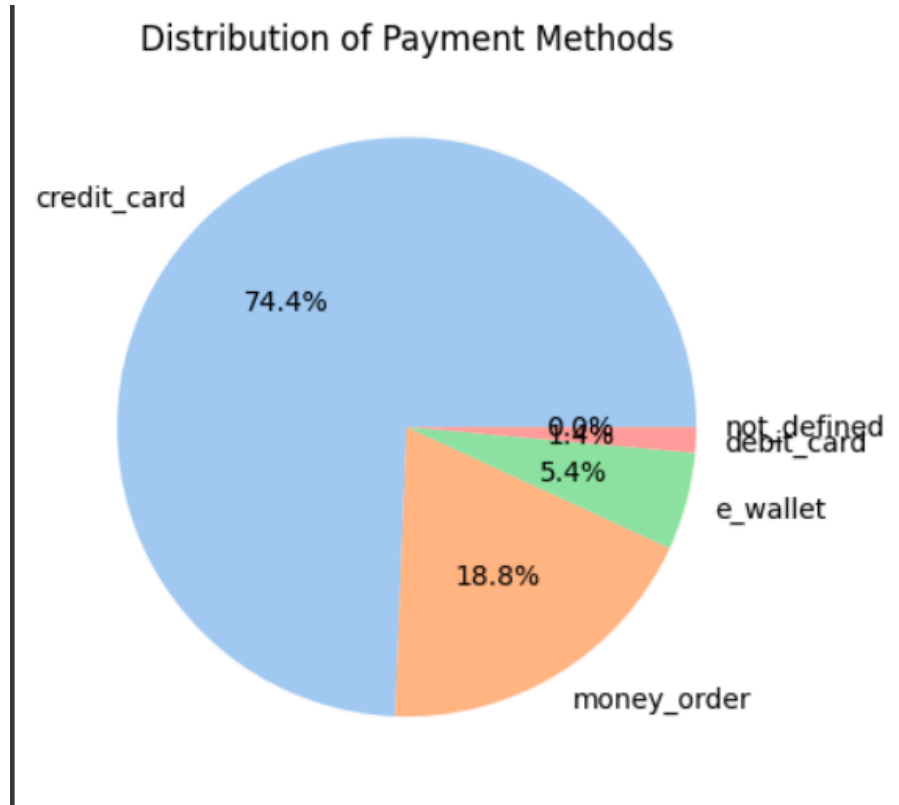
Time Series plot:

Insight : According to the above plot it seems that the peak season is from april to july.

Scatter plot :

Insight : It looks like as sales increases the amount of profit increases. Above scatter plot signifies that there must be linear relationship between sales and profit.

Pie plot:

Distribution of Payment Methods

Insight : Most of the customer prefer to pay by credit card.

Conclusion:

- **Comprehensive Overview:** The analysis offers a detailed view of e-commerce performance across product popularity, customer behavior, sales distribution, and profitability.
- **Insight Utilization:** The findings can be used to refine marketing strategies, optimize product offerings, and enhance operational efficiency.
- **Improved Business Outcomes:** Leveraging these insights can lead to better overall business performance.
- **Customer Experience:** Insights allow for tailored customer experiences based on data-driven decisions.
- **Future Growth Planning:** The analysis supports strategic planning for future growth aligned with consumer preferences and market trends.