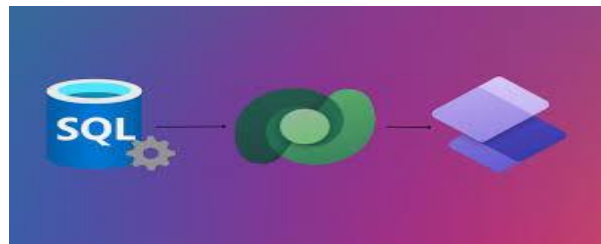


SQL AND DATABASES



PROJECT REPORT

BY,

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DATE: 5TH NOV 2023

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Problem Statement:

New-Wheels sales have been dipping steadily in the past year, and due to the critical customer feedback and ratings online, there has been a drop in new customers every quarter, which is concerning to the business. The CEO of the company now wants a quarterly report with all the key metrics sent to him so he can assess the health of the business and make the necessary decisions.

Objective:

As a data scientist, you see that there is an array of questions that are being asked at the leadership level that needs to be answered using data. Import the dump file that contains various tables that are present in the database. Use the data to answer the questions posed and create a quarterly business report for the CEO.

❖ Business Overview



Fig 1: Business Overview

Customer Metrics

❖ Distribution of Customers across states

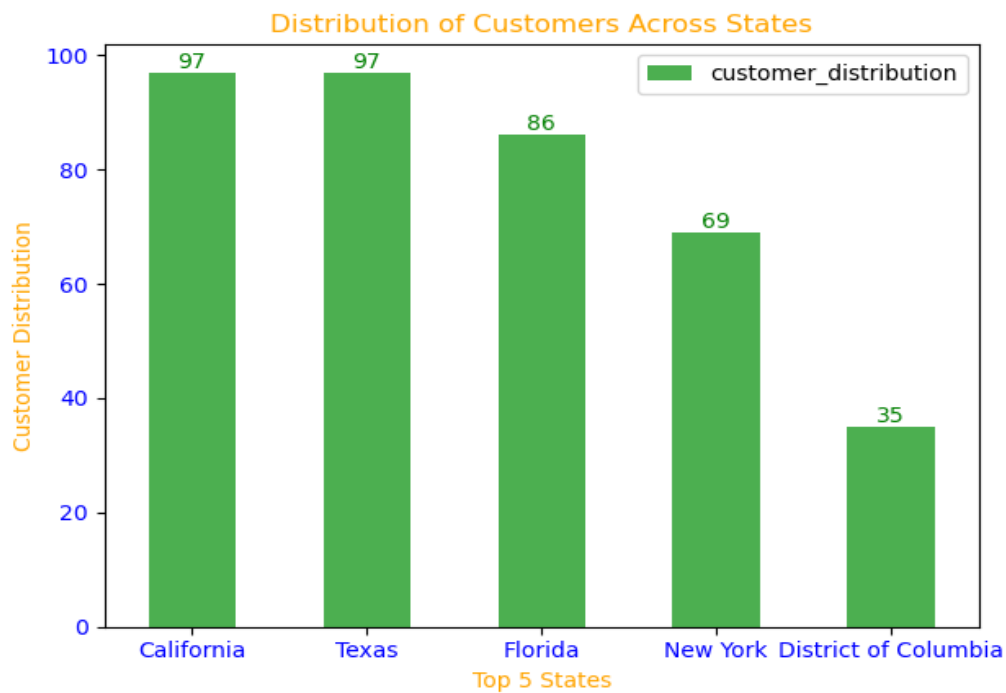


Fig 2: Customer distribution across states

Observations

- California and Texas have highest No of customer distribution as 97 Followed by Florida and so on.
- Top 5 States are California, Texas, Florida ,New York and District of Columbia.
- Mississippi, Maine, Vermont and Wyoming have Lowest No of Customer Distribution.

❖ Average Customer Rating by Quarter

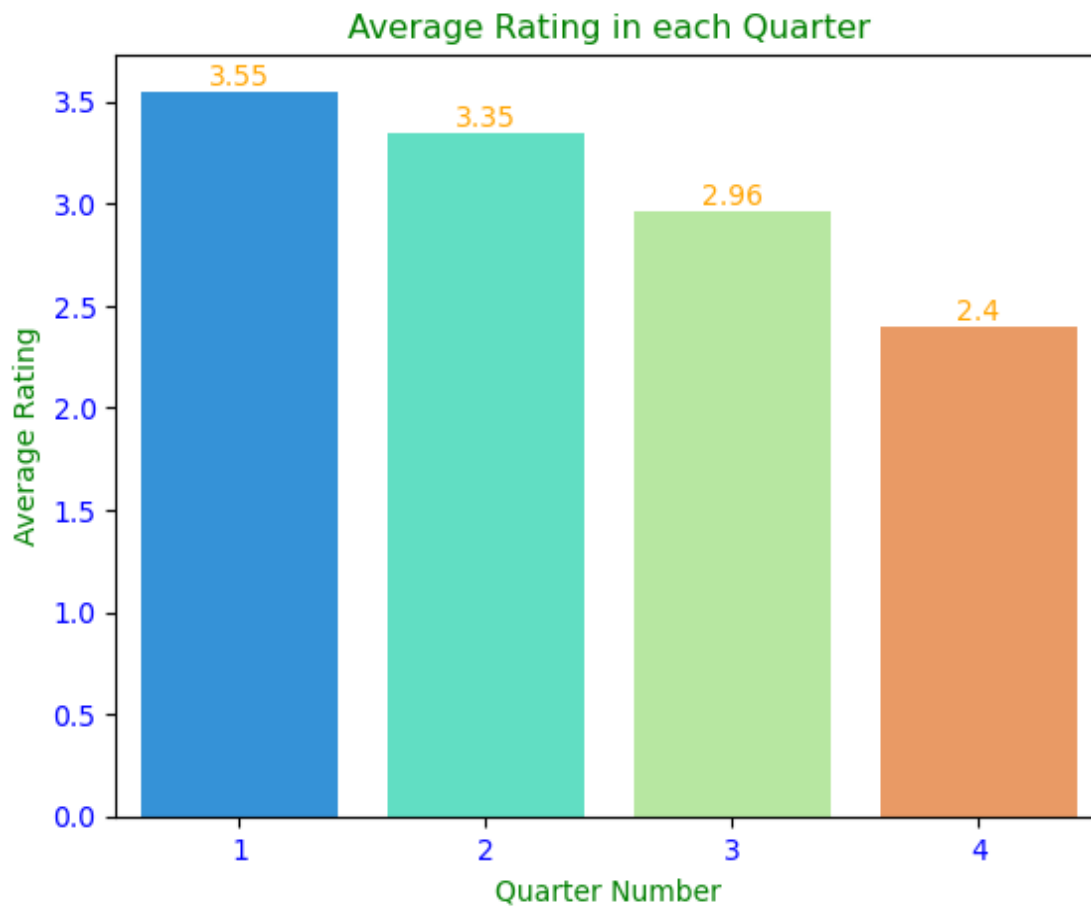


Fig 3: Avg Rating in each quarter

Observations

- ❖ Average Rating in Quarter 1 and 2 are 3.55.
- ❖ Average Rating in Quarter 2 is 2.96.
- ❖ Average Rating in Quarter 4 is 2.4

❖ Trend of Customer Satisfaction

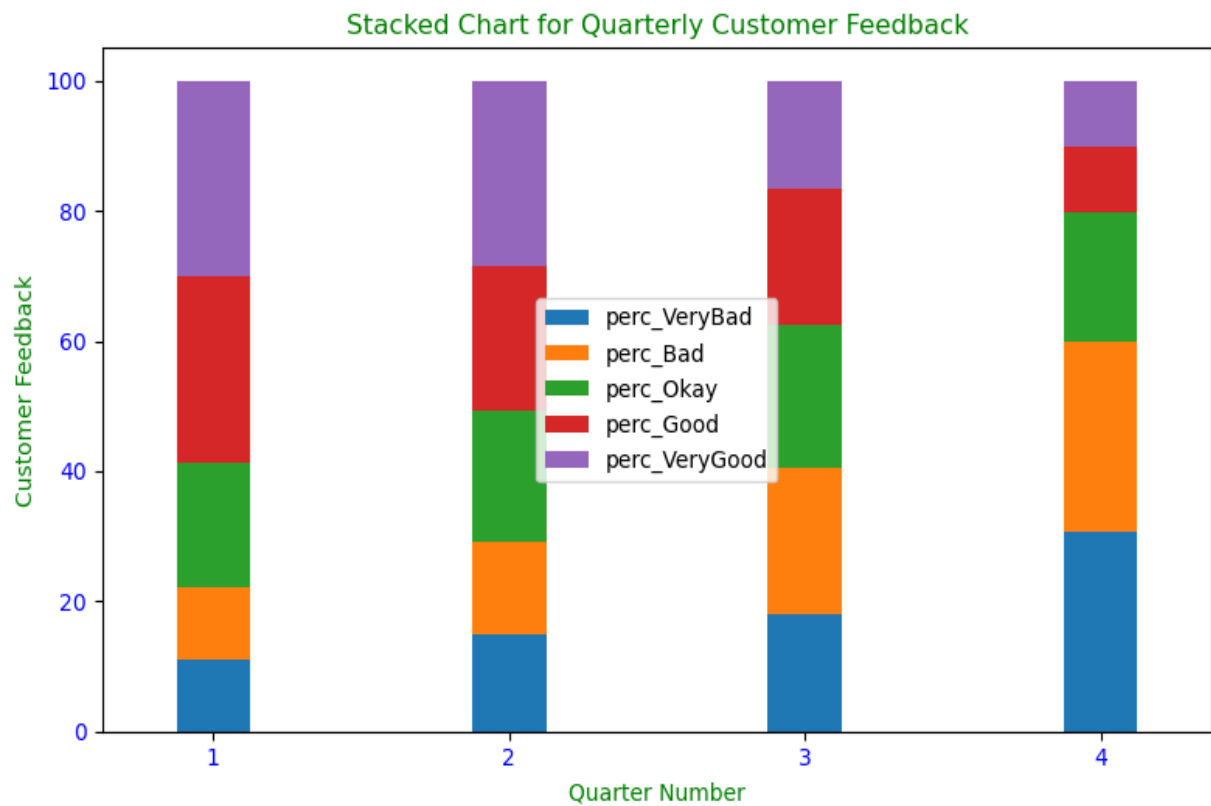


Fig 4: Quarterly customer Feedback chart

Observations

- We can observe that '% of Very Bad' customer Feedback is increasing with Quarters and '% of Very Good' Feedback is decreasing with quarters.
- This shows that customer is getting dissatisfied over time.

❖ Top Vehicle Makers preferred by Customers

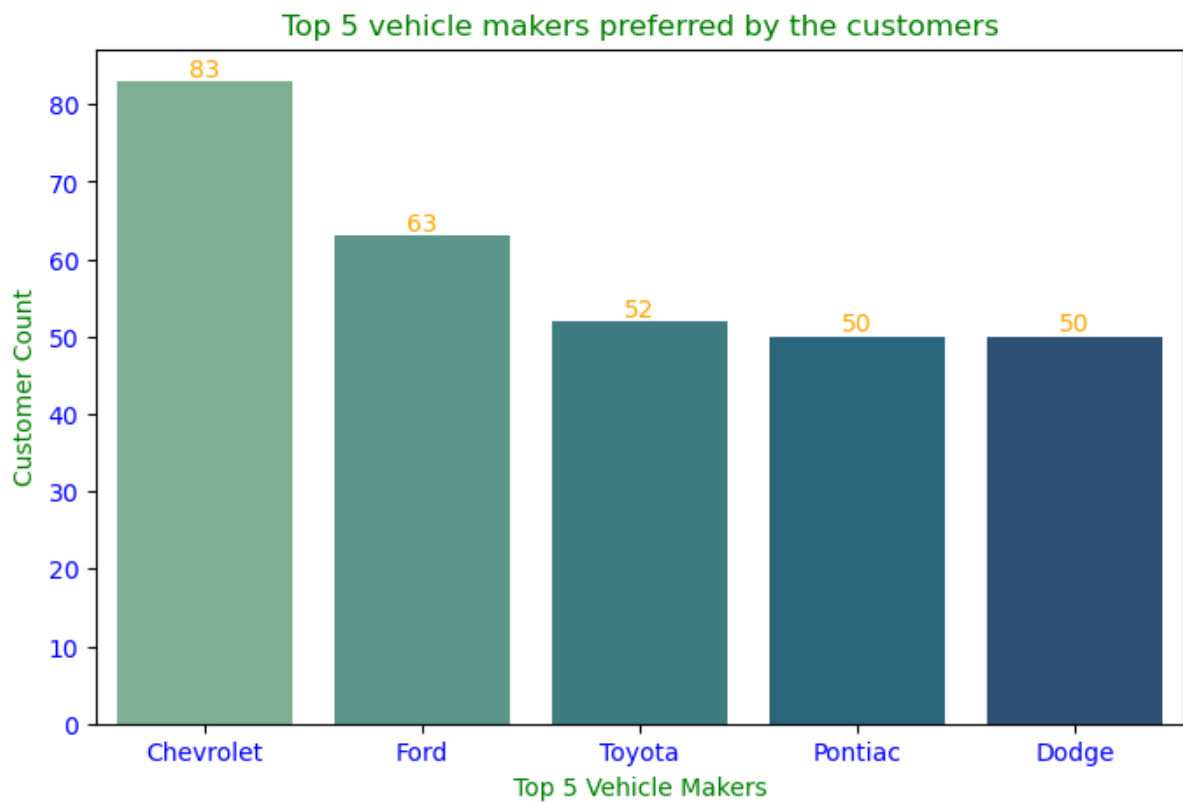


Fig 5: Top 5 vehicle makers by customers

Observations

- Top 5 Vehicle Makers Preferred by the Customers are Chevrolet, Ford, Toyota, Pontiac and Dodge.

❖ Most Preferred Vehicle Make in each State

State	Preferred Vehicle Maker	Count of Customer
Texas	Chervolet	9
Florida	Toyota	7
Callifornia	Ford,Dodge,Audi,Nissan,Chervolet	6
Ohio	Chervolet	6
Alabama	Dodge	5
Colarado, Washington	Chervolet	5
Maryland, Virginia	Ford	5
New York	Toyota, Pontaic	5
District of Columbia, Missouri	Chervolet	4
Indiana	Mazda	4
Arizona	Pontiac, Cadillac	3
Georgia, Pennsylvania	Toyota	3
Illinois	Ford, GMC, Chervolet,	3
Michigan	Ford	3
Minnesota	GMC	3
Nevada	Pontiac	3
North Carolina	Volvo	3
Tennessee	Mazda	3
Alaska	Chervolet	2
Connecticut	Chervolet,Mercury,Maserati,Volvo	2
Delaware	Mitsubishi	2
Idaho, New Mexico	Dodge	2
Louisiana	BMW,Nissan, Ford, Pontiac, Kia	2
Massachusetts	Dodge,Chevrolet	2
New Jersey	Mercedes-Benz ,Hyundai	2
Oklahoma	Toyota,Ferrari,Mazda	2
Oregon	Toyota	2
West Virginia	Mercedes-Benz	2
Arkansas	Suzuki,Chevrolet, Pontiac,Volkswagen,Mitsubishi,GMC	1
Hawaii	Ford,Toyota,Pontiac,Nissan,Cadillac, GMC	1
Iowa	Chrysler,Subaru,Chevrolet,Hyundai,Isuzu,Dodge, Mazda, Porsche, Jeep, Ford, Pontiac	1
Kansas	GMC,Lexus,Buick,MercedesBenz,Suzuki,Honda,Do dge,Volkswagen,Ford,Mazda,Maserati,Nissan,Saab	1
Kentucky	Mercedes Acura, Mercury ,Audi, Ram, Volvo, Pontiac ,Nissan,	1
Maine	MercedesBenz	1
Mississippi	Dodge,Toyota	1
Montana	Chevrolet,Mitsubishi,Dodge	1
Nebraska	Chevrolet,MercedesBenz,Volkswagen,Nissan, Pontiac,Toyota,Cadillac	1
New Hampshire	Chrysler,Lincoln,Lexus	1
North Dakota	Hyundai,Ford	1
South Carolina	Acura,Buick,BMW,Kia,Mazda,Mitsubishi,Dodge, Jaguar,Isuzu	1
Utah	Maybach,Volkswagen,Isuzu,Subaru,Lincoln, Chevrolet,Oldsmobile,Pontiac,Dodge,Buick	1
Vermont	Mazda	1
Wisconsin	Pontiac,Chevrolet,Acura,Mazda,Nissan,Cadillac, Dodge,Honda	1

Observations

- Texas is the most preferred state for vehicle Chevrolet.
- Florida is the most preferred state for vehicle Toyota.
- California is the most preferred state for vehicles Ford, Dodge, Audi, Nissan, Chevrolet and so on..

Revenue Metrics



Trend of Purchases by Quarters

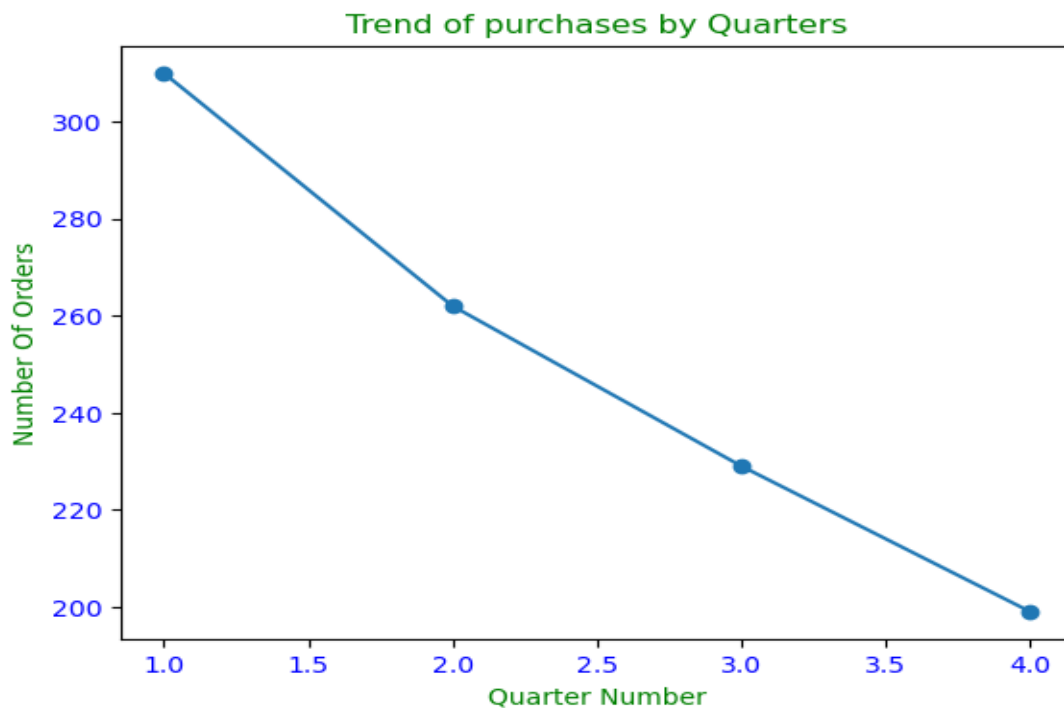


Fig 6: Trend of purchase by Quarters

Observations

- Number of Orders are decreasing with increasing Quarters.
- Trends of Number of Orders are declining from quarters to quarters.

❖ Quarter on Quarter % change in Revenue

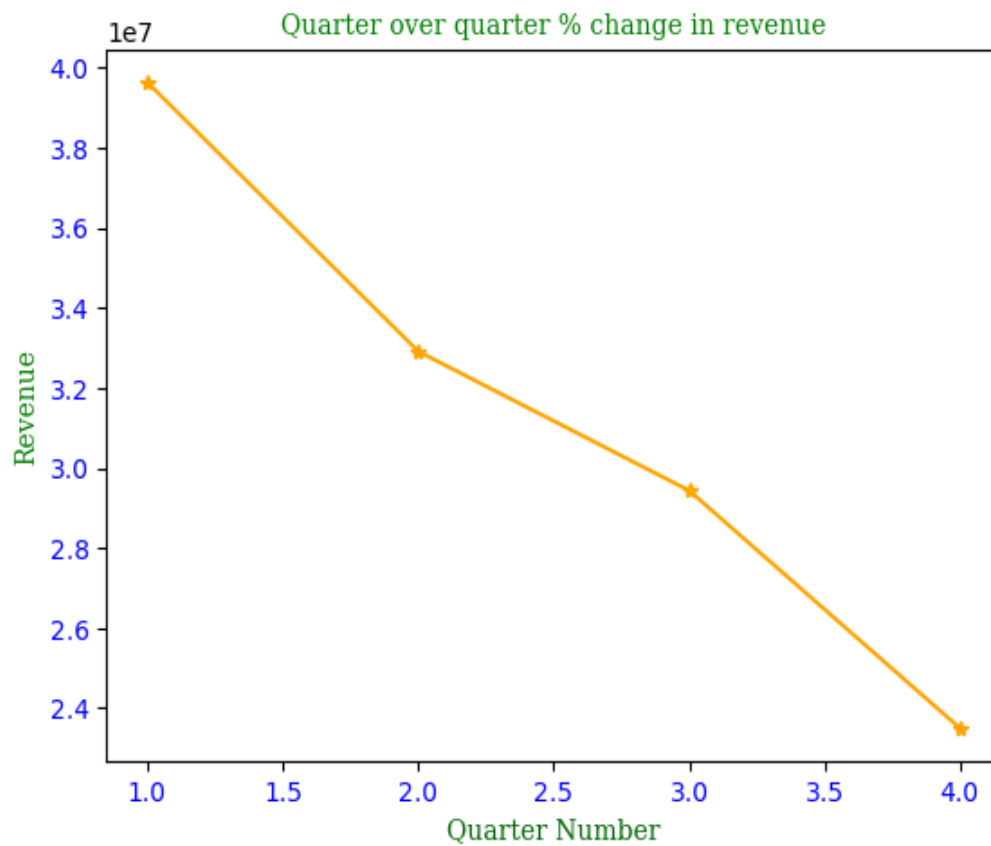


Fig 7: Quarter over quarter % change in revenue

Quarter Number	Revenue	Quarter % change in Revenue
1	39637630.97	NaN
2	32913737.76	-16.96
3	29435427.48	-10.57
4	23496008.22	-20.18

Observations

Quarter change in Revenue is declining by (-16.96),
(-10.57), and
(-20.18)

❖ Trend of Revenue and Orders by Quarters

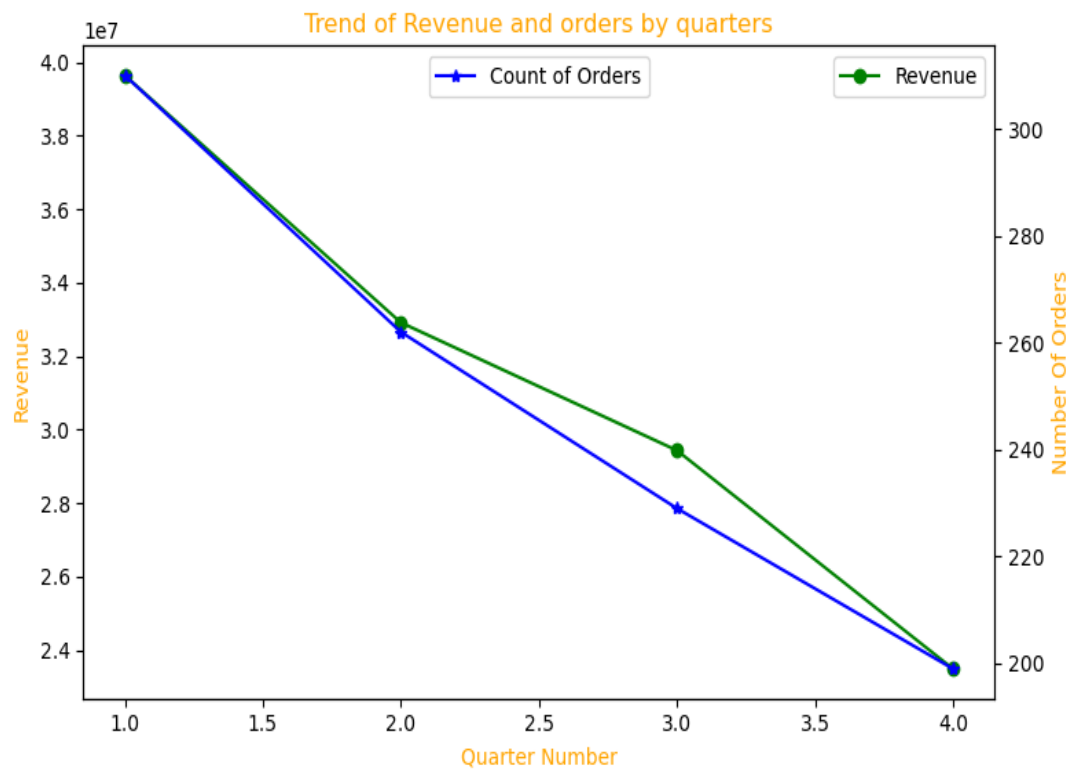


Fig 8: Trend of Revenue and orders by quarters

Observations

- We observed a decreasing Trend in both Revenue and Number of Orders quarter by quarter.
- Orders in Quarter 4 is not Generating much Revenue.

Shipping Metrics

❖ Average discount offered by Credit Card Type

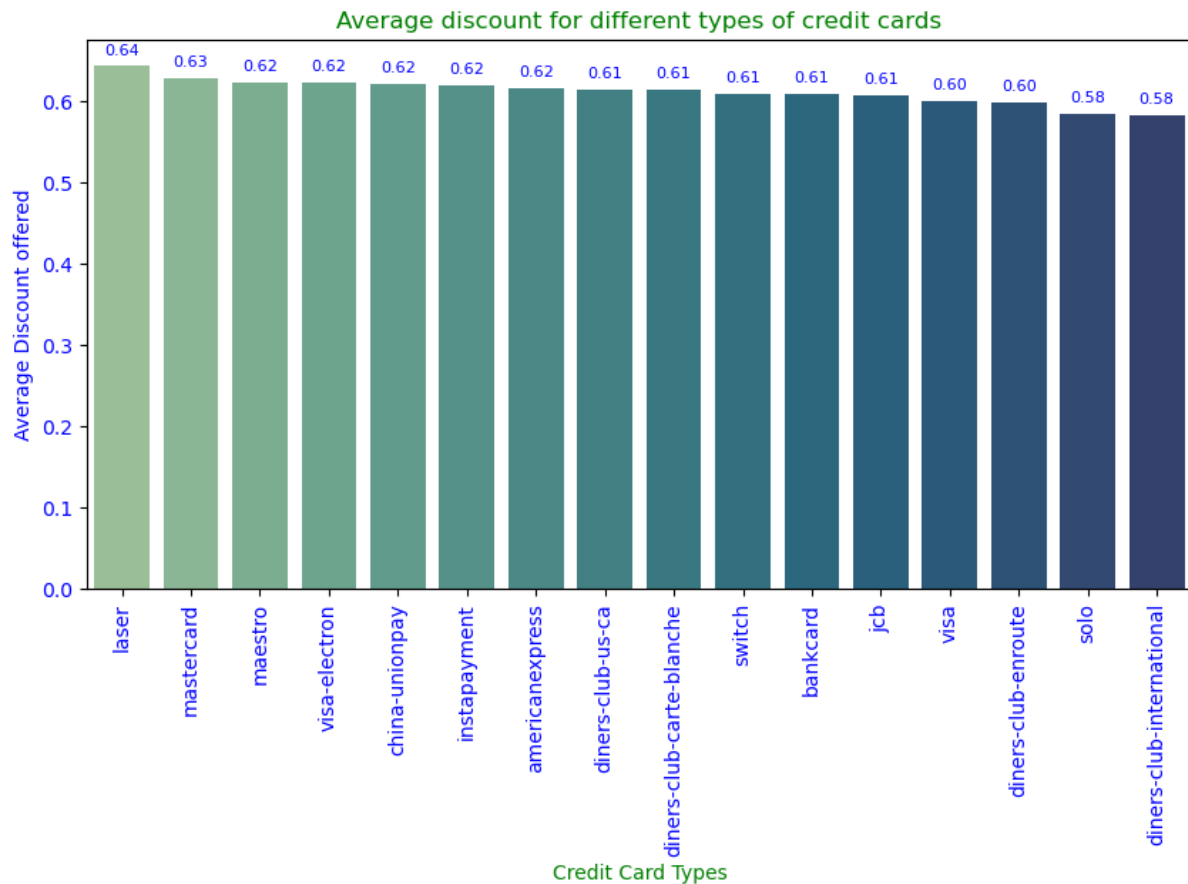


Fig 9: Avg discounts on Credit Cards

Observations

- Average discount for different Credit Cards ranges from 0.58 to 0.64.
- Laser Credit Card offer highest discount of 0.64

❖ Time Taken to Ship Orders by Quarters

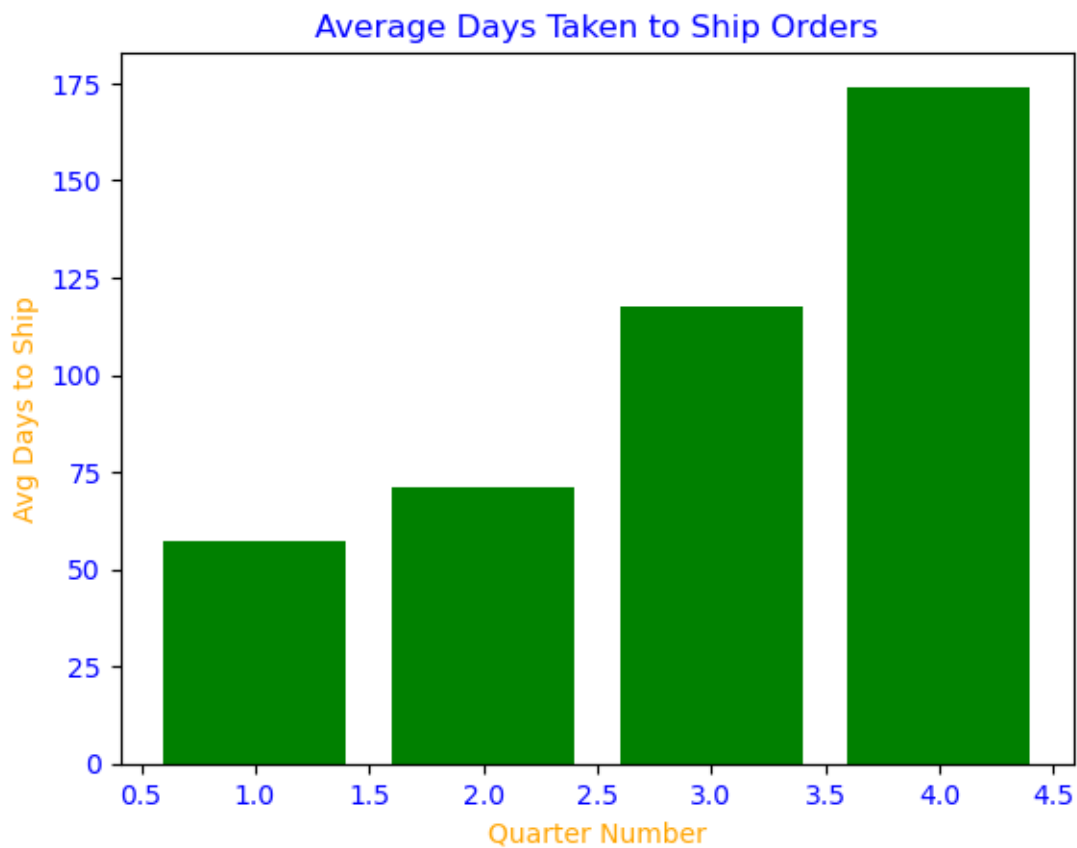


Fig 10: Avg days to ship orders

Observations

- Average days Taken to ship orders is increasing from Quarter to Quarter.
- Shipping is getting delayed with Time.

Insights and Recommendations

❖ Insights:

- California and Texas have highest number of customer distribution as 97 followed by Florida and so on.
- Top 5 states are California, Texas, Florida, New York and District of Columbia.
- Mississippi, Maine, Vermont and Wyoming have lowest number of customer distribution.
- Average ratings have been declined from quarter to quarter.
- Customers has been dissatisfied over the time.
- Most selling Vehicle makers during all the time was Chevrolet followed by Ford, Toyota, Pontiac, Dodge and so on.
- Orders & Revenue is declining continuously, whereas revenue has been dipped more quarter in 2 & 3.
- Average discount offered as per the credit card type ranges from 0.58% to 0.64%.
- Shipping of orders are delaying more from quarter to quarter, quarter 4 took avg of 174 days to ship orders.

❖ Recommendations:

- Companies should provide offers and good services to states having less buyers of cars to increase sales.
- Companies should provide fast delivery services by changing shipping methods so that customers are more satisfied with time due to fast delivery.
- Less preferred cars should be announced with great deals and promotions.
- Online surveys should be conducted to find factors for less sales.
- To increase companies Revenue, companies should run campaign to attract more customers.
- Companies should also think of increasing Ratings by providing quality services.

Thank You