New Wheels

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Business Overview

- New Wheels is involved in the Wholesale new auto sales market

- Recent trends of new car sales are lower while many consumers are opting to obtain a used vehicle . This is a business cycle trend that will continue until the used vehicles meet a financial level where it makes sense via incentives and quality to obtain a new car.

- The business has seen recent challenges with lower orders, higher dissatisfaction and longer waiting times for shipping of orders. We are attempting to dive deeper into the business to evaluate how we may be able to display some valuable insight.

Summary of Last Quarter by the numbers

Total Revenue- $124,714,076

Total Orders - 1000

Total Customers- 994

Average Rating- 3.06

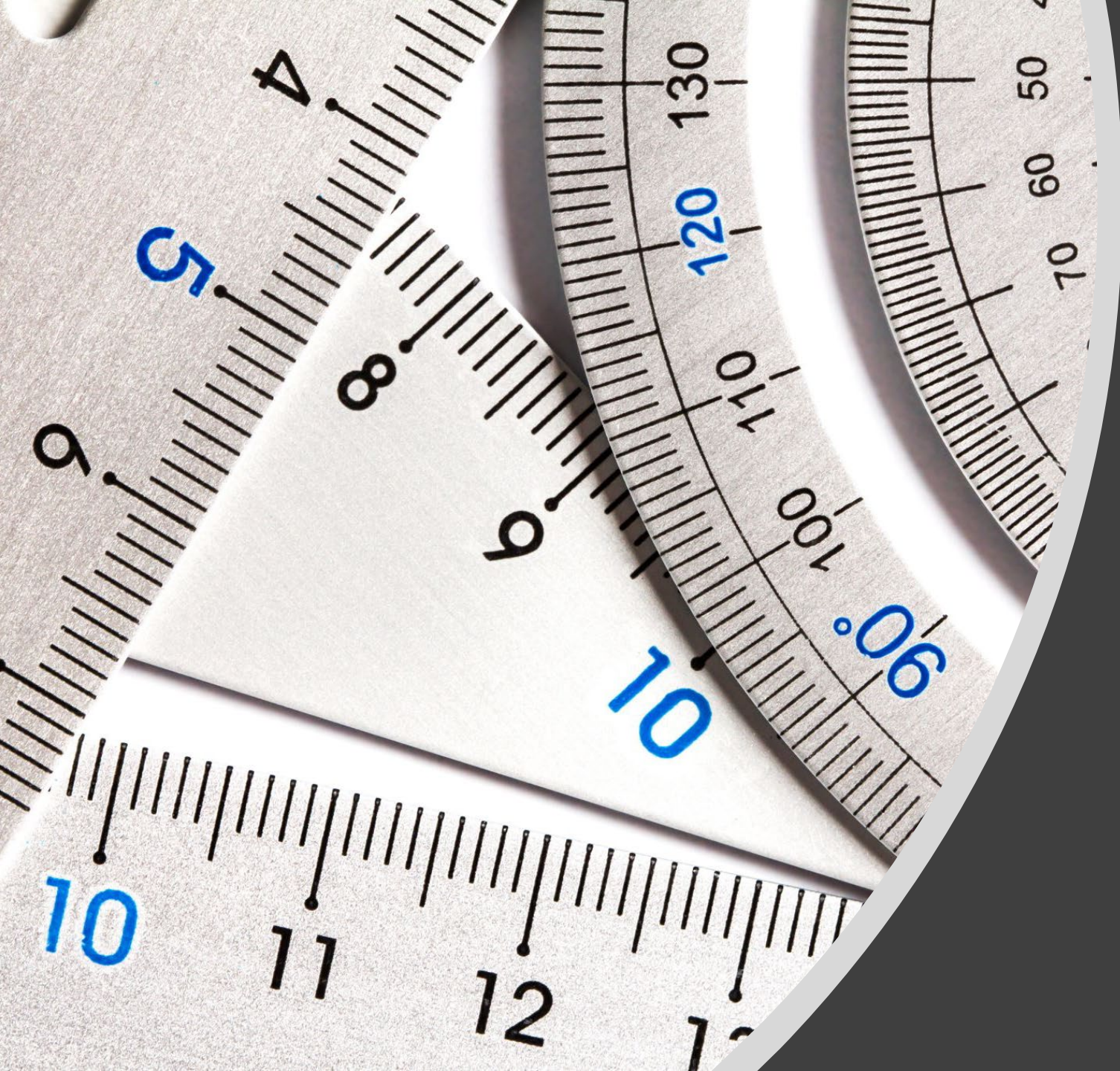Last Quarter Revenue- $23,346,776 (QoQ percentage change of 20.13% from 3rd Qtr)

Last Quarter Orders- 199

Average Days to Ship- Average overall – 105.03 days
- 1st Quarter = 57
- 2nd Quarter = 71
- 3rd Quarter = 117
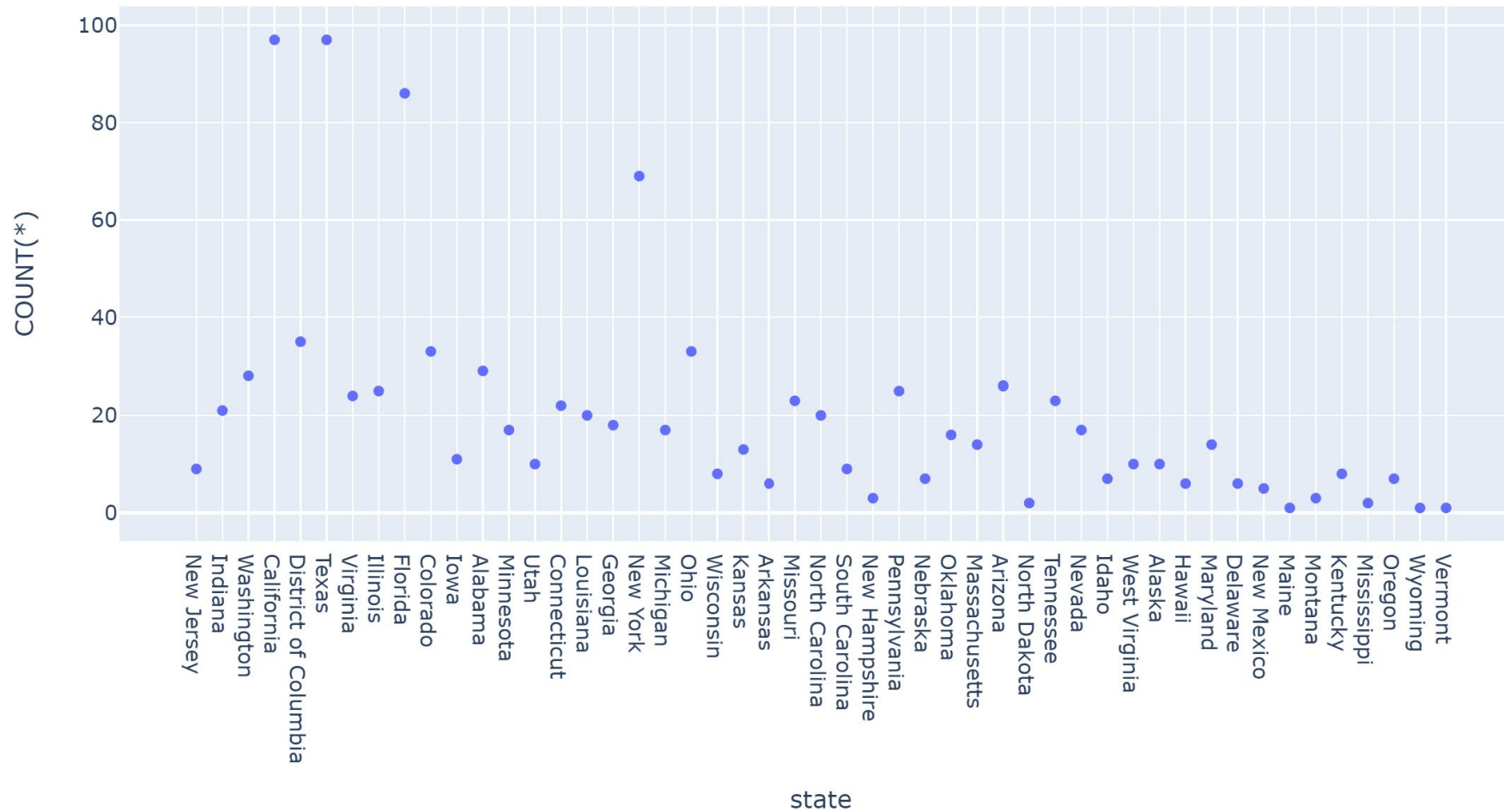- 4th Quarter = 174

% of Positive Feedback – 64.3%

Average Discount- .6128 (standard deviation .0155)

CUSTOMER
METRICS

Customers Across the US

Top States
Texas and California -97
New York – 69

Least States
Vermont-1
Maine – 1

* Effort should be made to increase the number of customers in the lower states to lower overall costs.

Average Customer Ratings by Quarter

1st qtr- 3.55 cust rating
2nd qtr- 3.355 cust rating
3rd qtr- 2.95 cust rating
4rh qtr- 2.397 cust rating

* Steps should be made to change the direction of the customer satisfaction as soon as possible. Later we will discover how we believe shipment dates are potentially affecting these attitudes
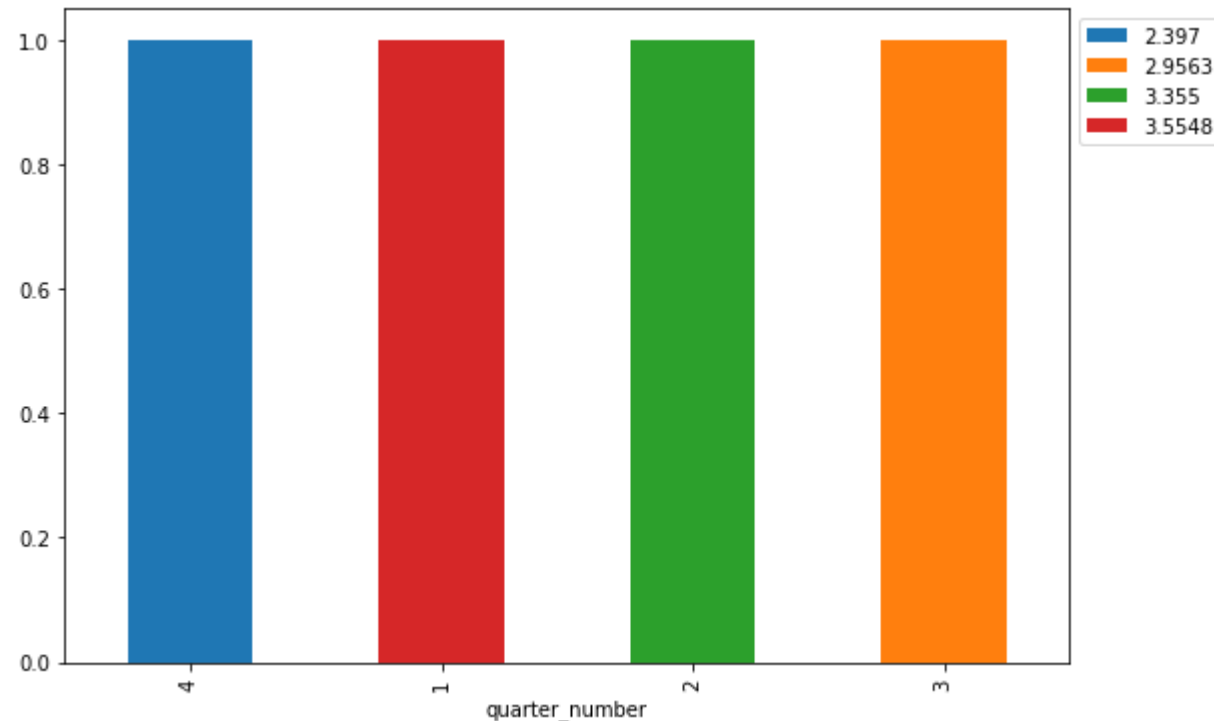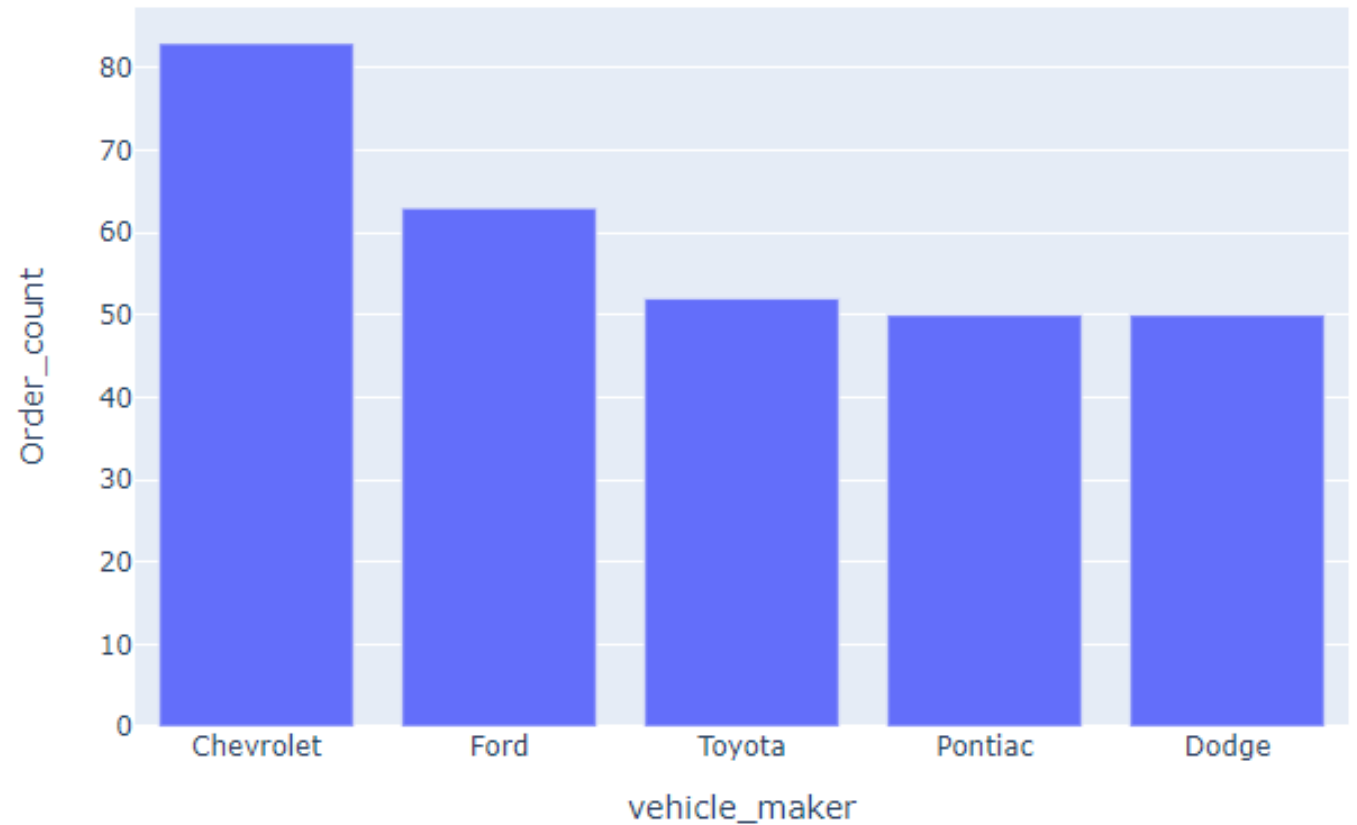
Average feedback by quarter
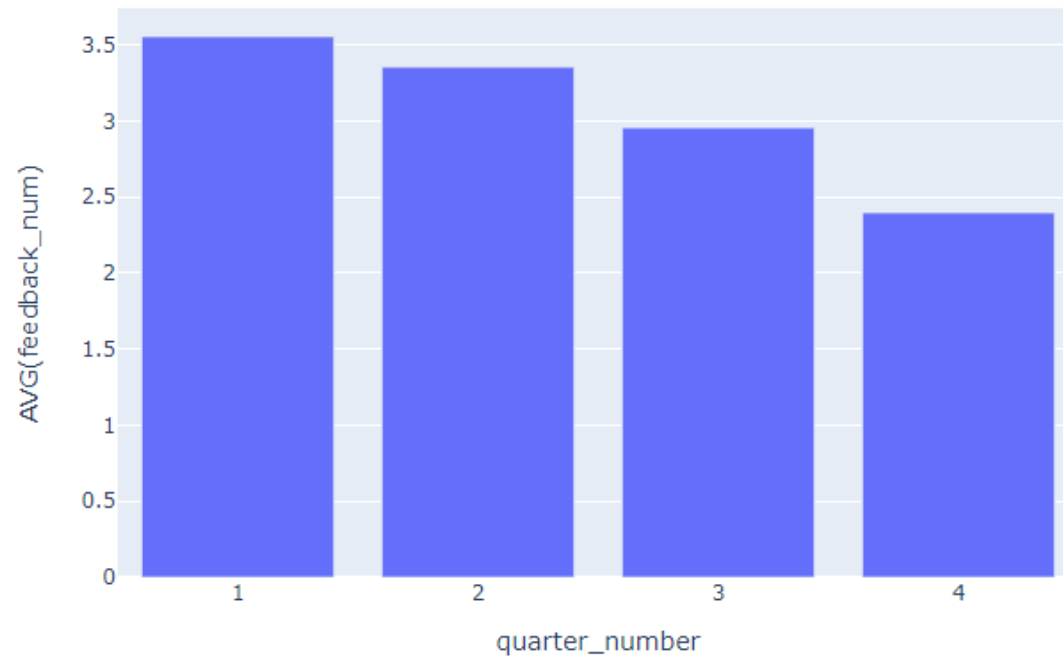
A clear negative trend which picked up pace
During the 4th quarter.

TREND OF CUSTOMER SATISFACTION

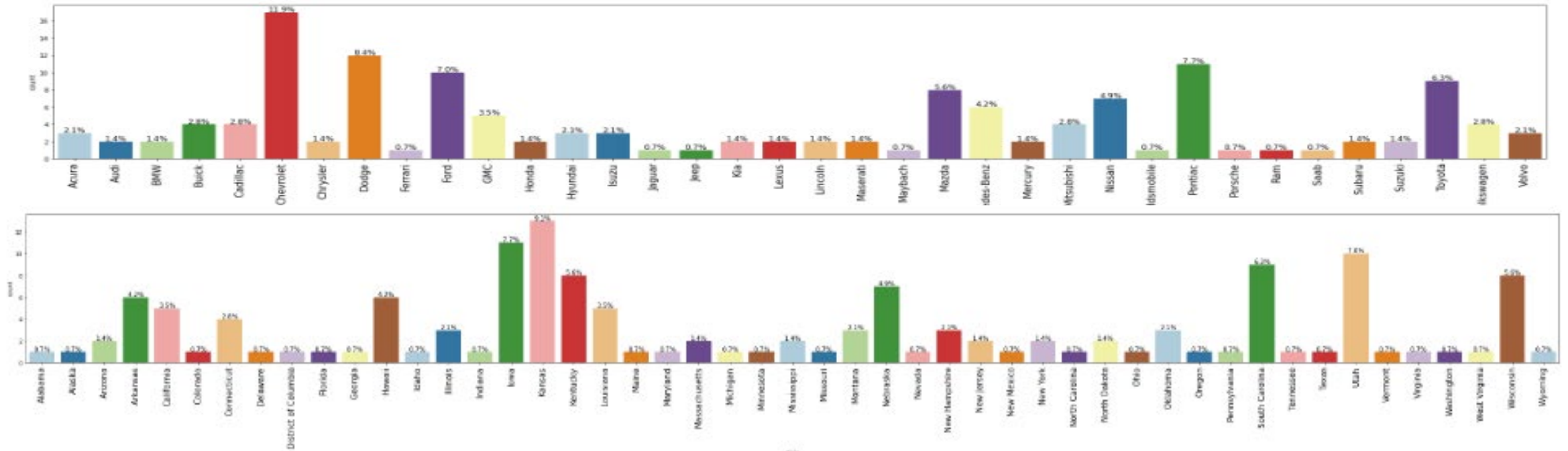# Top Vehicle makers preferred by customers

- 1. Chevrolet- 83
- 2. Ford – 63
- 3. Toyota- 52
- 4. Pontiac- 50
- 5. Dodge- 50

Top 5 Vehicle Makers by Customer

Most Preferred Vehicle in each state

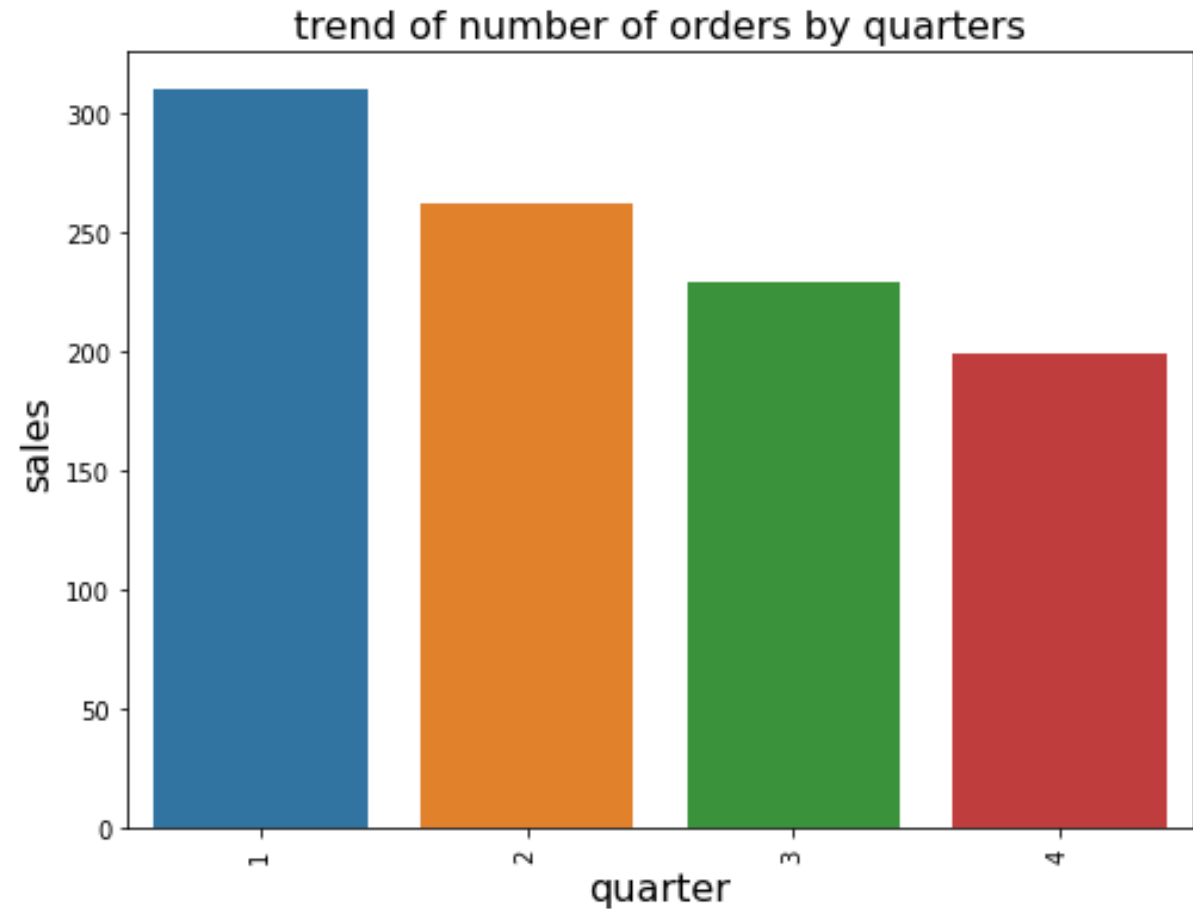Kansas overwhelmingly preferred the Cadillac as the highest observation

REVENUE Metrics

Trend of number of purchases by quarter
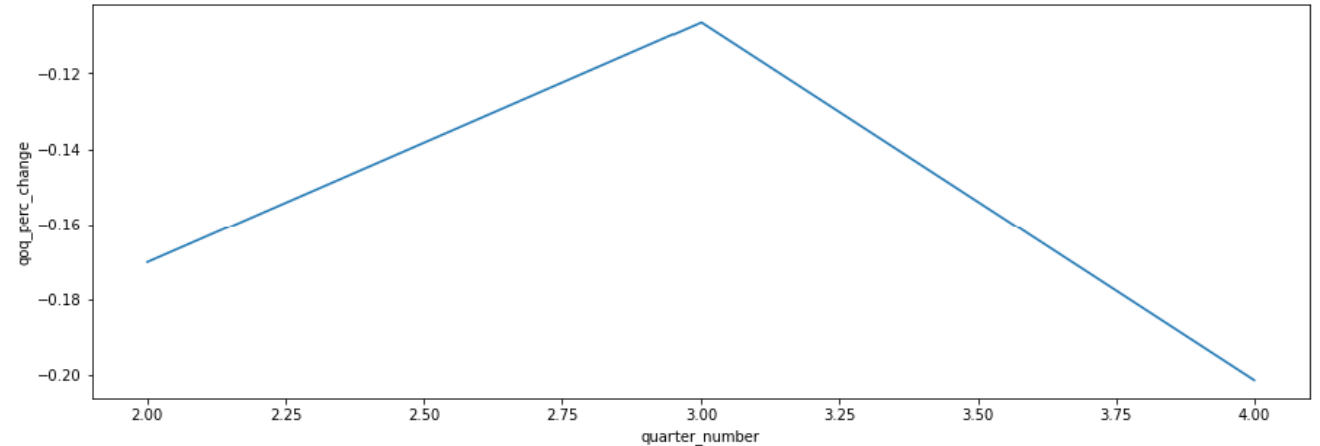
- Decay of sales consistently from the first quarter

- 1st QTR- Sales- 310

- 2nd QTR- Sales- 262

- 3rd QTR-Sales – 229

- 4th QTR-Sales- 199

- Mean QoQ reduction of 13.7%

trend of number of orders by quarters

Quarter on Quarter % change in Revenue

3rd quarter showed less of a percentage change, however this is merely a change in the slope of decline.



quarter_number	revenue	previous_revenue	qoq_perc_change
1	39421572	NaN	NaN
2	32715830	39421572.0	-0.1701
3	29229898	32715830.0	-0.1066
4	23346776	29229898.0	-0.2013

Trend of Revenue and Orders by Quarter

quarter_number	revenue	current_quarter_ordernum
1	39421572	310
2	32715830	262
3	29229898	229
4	23346776	199

- Orders per quarter consistently have declined since the first quarter

- Revenue has also declined , however the slope has steepened during the 4th quarter. This may signify that our margins are increasingly strained and unit costs are catching up with our overhead.
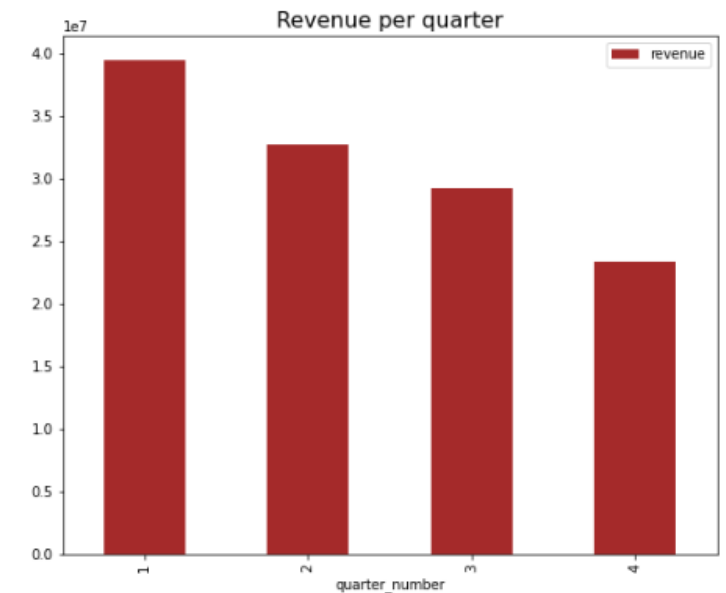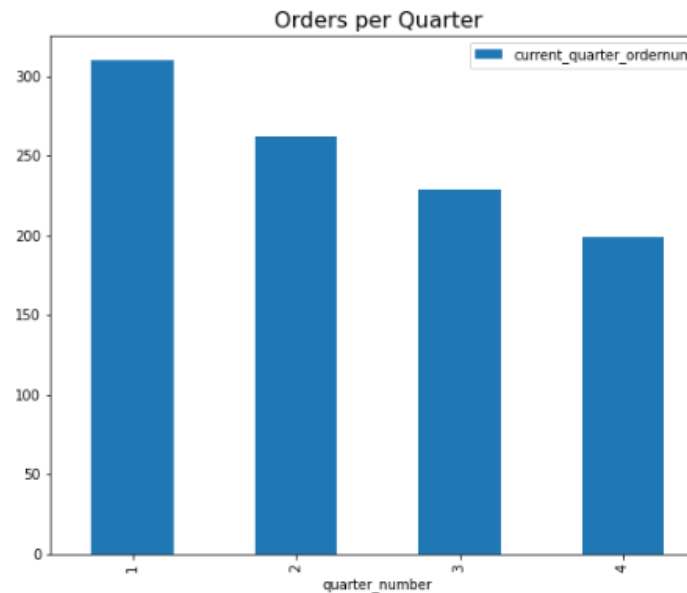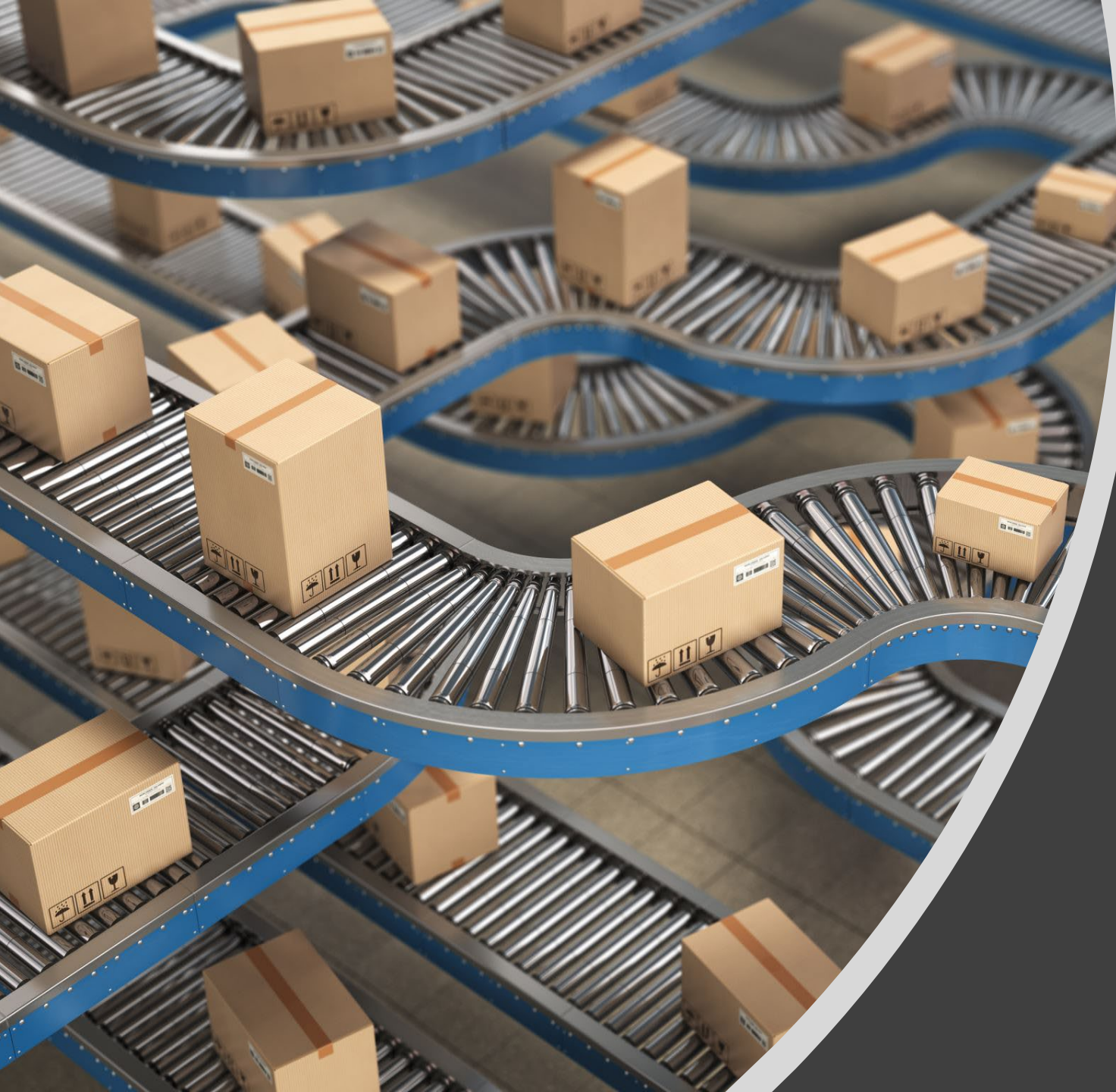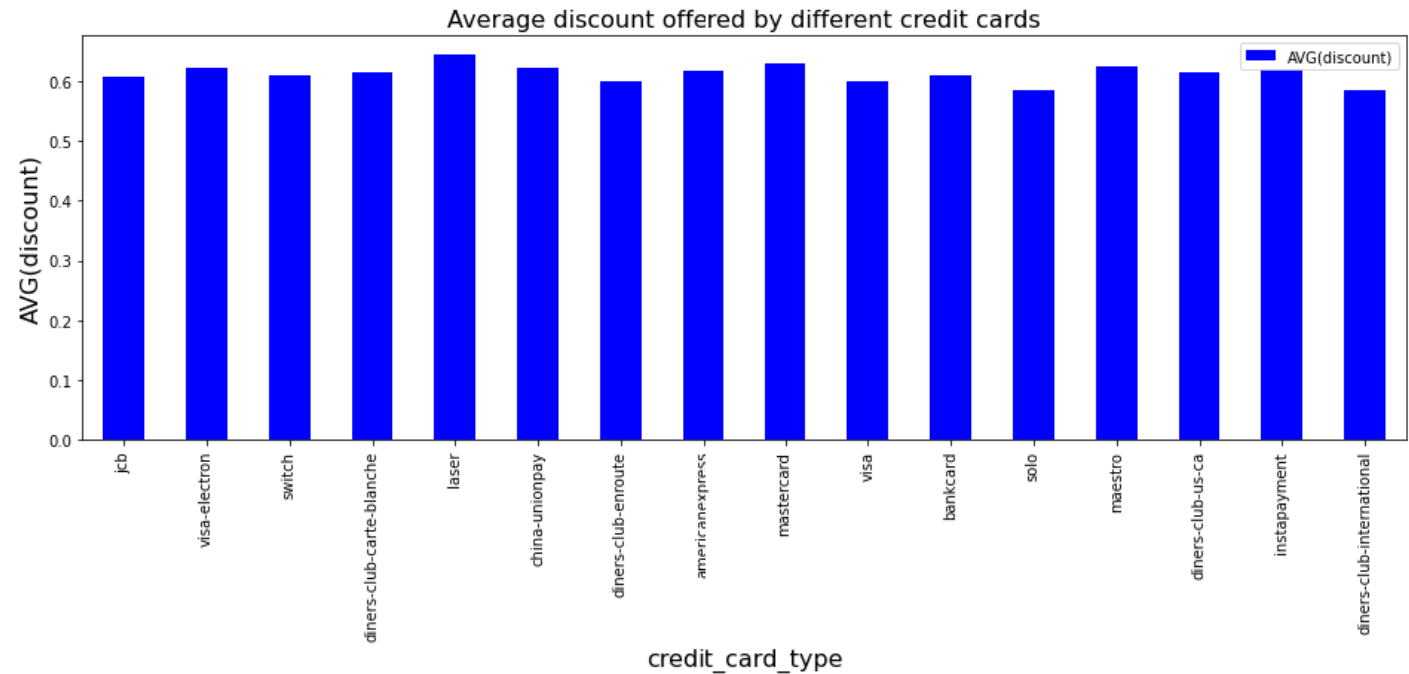
SHIPPING METRICS

Average discount offered by Credit Card type

- The Average discount is .612878

- The Minimum discount is .584

- The Maximum discount is .643846

- Since the standard deviation is .015526 this would suggest that the discounts are fairly closely distributed. Our charting reflects this distribution.

Average discount offered by different credit cards

Time taken to ship orders by Quarter

- Average time taken for year is 105.03 days from order date to shipping date.
- Maximum time taken is 174.09 days (current)
- This chart coincides with our revenue and order decline- showing a inverse relationship and may be a contributing factor
- This chart also shows a similar inverse relationship with our customer feedback
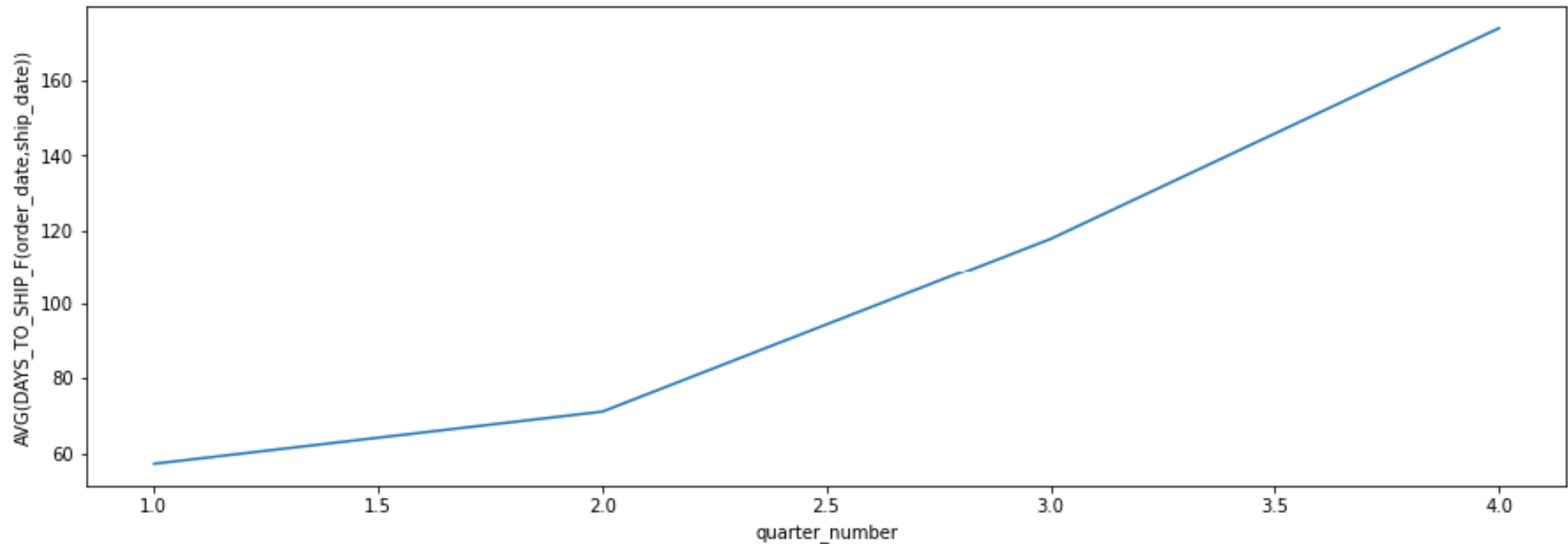
Recommendations and Insights

Senior management needs to investigate methods to reduce the delivery time . An analysis needs to occur on methods to reduce this time or to provide our customers with incentives until this can improve.

Attention to customer feedback – surveys or a analysis on the decay of our customer satisfaction . The data science team can run a series of models to determine the probability of a correlation.

Development of markets should be considered- as it is expensive to have small numbers of customers in individual states. Compliance and logistics are more evenly able to spread the margins.

Application of pressure or work with our suppliers (ie. Vehicle manufacturing companies) to pre-order vehicles which have strong demand . The use of data analytics and strong contact with our data base system should help us to combat some of the delay by increasing our inventory temporarily .

- Thank you for your time