US E-Commerce

DATA STORY-TELLING WITH QUICKSIGHTS

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CONTENTS

- Dataset Facts
- Analysis Process
- Business Overview
- Who are Customers?
- All about Orders
- Further Conclusion

DATASET FACTS

▶ Topic: E-Commerce in USA

▶ Timeline: from 13 Sep 2013 to 14 Jan 2014 break into weeks

▶ Dataset could be divided into

▶ Sales Measures

▶ Customers' Profile

▶ Product Details

▶ Transaction Facts

Analysis Process

- ► BUSINESS OVERVIEW
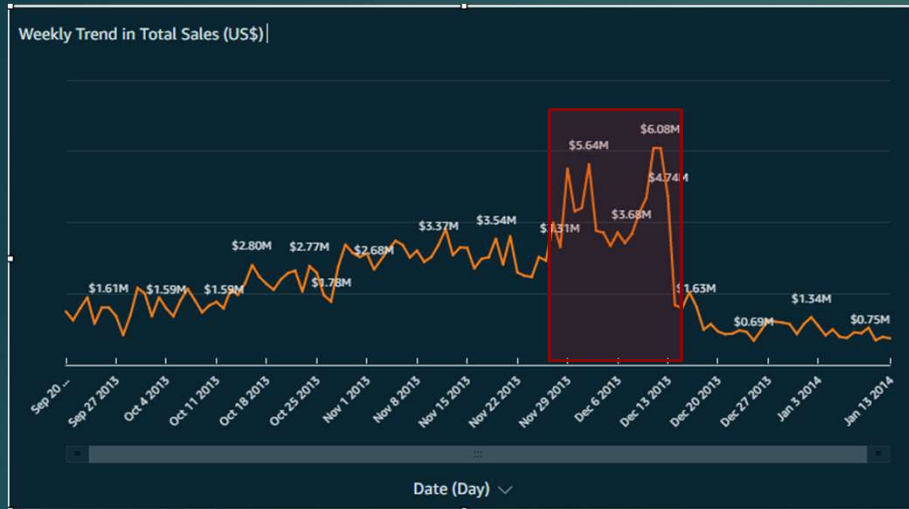- ► CUSTOMER PROFILE
- ► DEEP INSIDE PRODUCTS
- ► TRANSACTION CONTROL

Products
- Favorite Choice
- Cross-Selling

Customers
- Demographics
- Behaviors

Transactions
- Total Orders
- Analysis

BUSINESS OVERVIEW

▶ HOW OUR MONEY WAS MADE?

- Sales trend

- Sales distribution
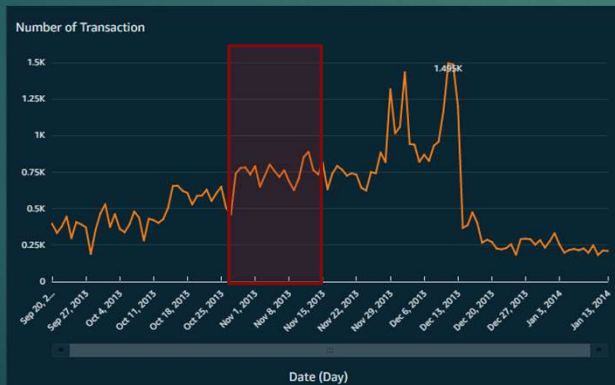
    - Location

    - Product Category

SALES TREND

Weekly Trend in Total Sales (US$)

$1.61M $1.59M $1.59M $2.80M $2.77M $2.68M $1.78M $3.37M $3.54M $4.31M $3.68M $5.64M $6.08M $4.74M $1.63M $0.69M $1.34M $0.75M

Date (Day)

Total Sales

$268.80M

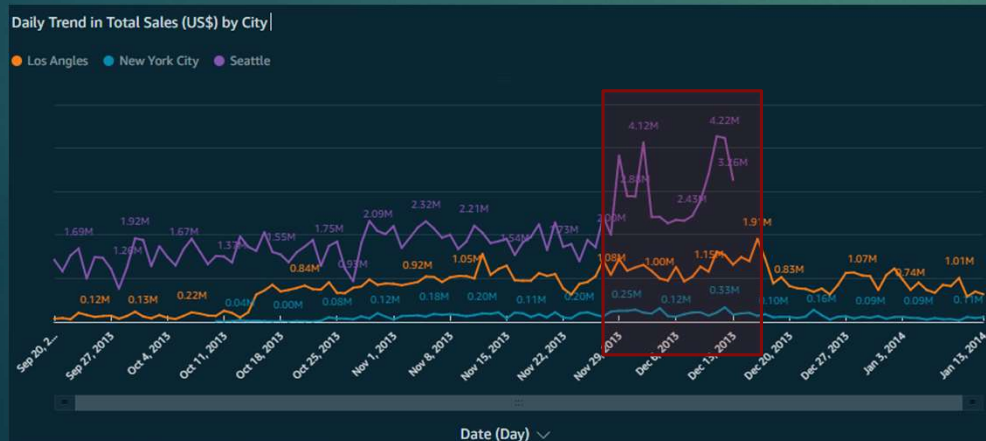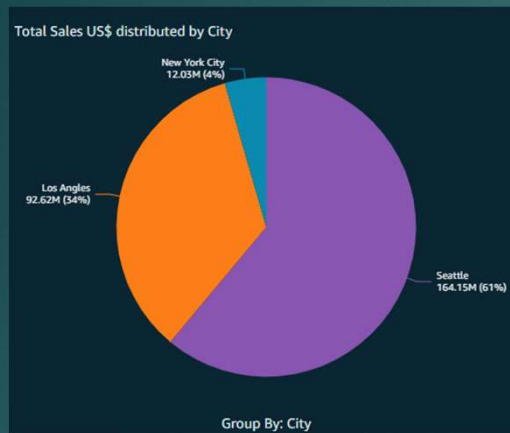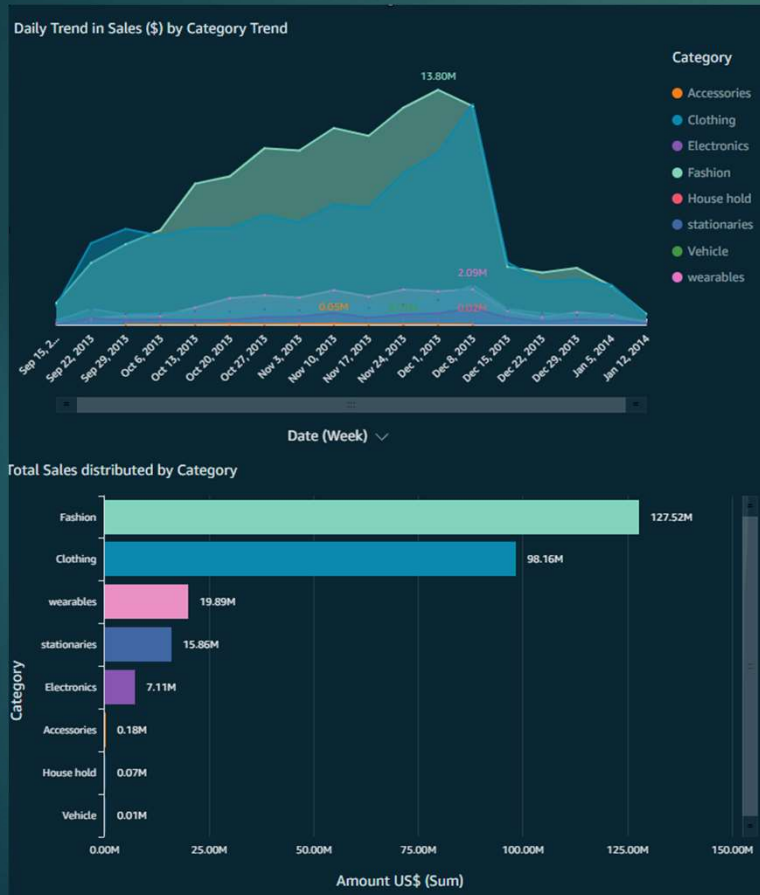Number of Transactions

65,376

Number of Transaction

Date (Day)

- Sales increased moderately from about $1.5M daily in the last week of Sep 2013 and surged during the end of November to the first two weeks of December, up to $6M in Dec 11-12.

- Sales sharply decreased to under $1M per day in the last two week of Dec to the rest.

➢ *It is expected that the business would be running marketing campaign for Xmas holiday, therefore customers make the most purchases during October and November. As people early started to shop for the holiday since the end of September, they limit their spending about 10 days before Xmas to prepare the party.*

SALES VS GEOGRAPHY

Total Sales US$ distributed by City

New York City
12.03M (4%)

Los Angles
92.62M (34%)

Seattle
164.15M (61%)

Group By: City

Daily Trend in Total Sales (US$) by City

● Los Angles ● New York City ● Seattle

Date (Day)

- Sales were from 3 cities : Seattle (Washington), New York City (New York), Los Angles (California).

- The vast Sales were from Seattle (61%) following by Los Angles (34%). However, there was no data for Seattle after Dec 13, 2013.

- It was the up trend in Sales for both Seattle and Los Angles from Sep 20,2013 to Dec 16,2013.

- The spending was limited after Dec 16, 2013 in all cities

- *New York City might be the new market with the Sales under 0.3M per day.*

SALES VS CATEGORY

Daily Trend in Sales ($) by Category Trend

Category
- Accessories
- Clothing
- Electronics
- Fashion
- House hold
- stationaries
- Vehicle
- wearables

Date (Week)

Total Sales distributed by Category

Top 3 Category for total Sales are:
- **Fashion** with 127.52M
- **Clothing** with 98.16M
- **wearables** with 19.89M

Bottom 3 Category for total Sales are:
- **Vehicle** with 0.01M
- **House hold** with 0.07M
- **Accessories** with 0.18M

- People splurged on Fashion ($127.5M) and Clothing ($98M).

- Even when the total spending dropped significantly, they still spent the majority on Clothing and Fashion.

➤ *It might because shopping for Fashion and Clothing is easier via online platform while Electronics or Vehicle are needed to be more considered.*
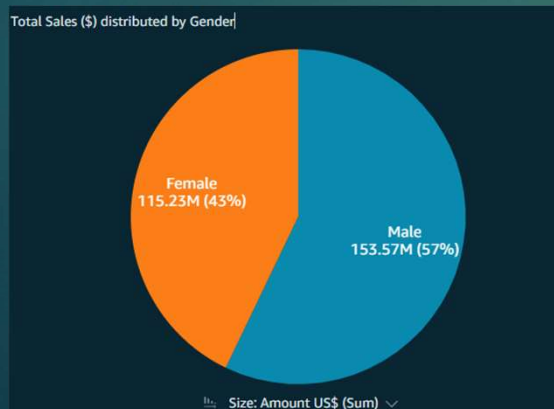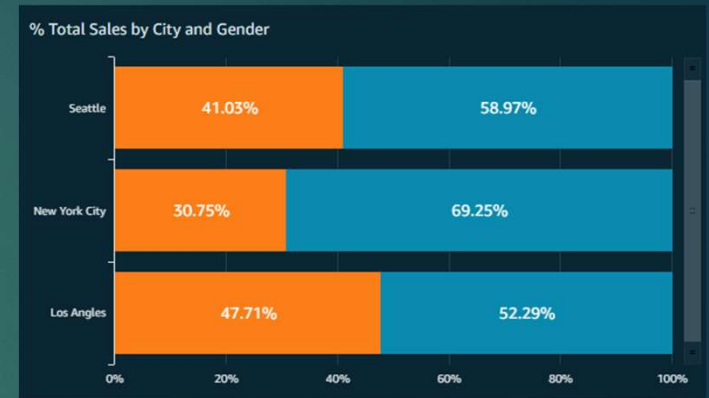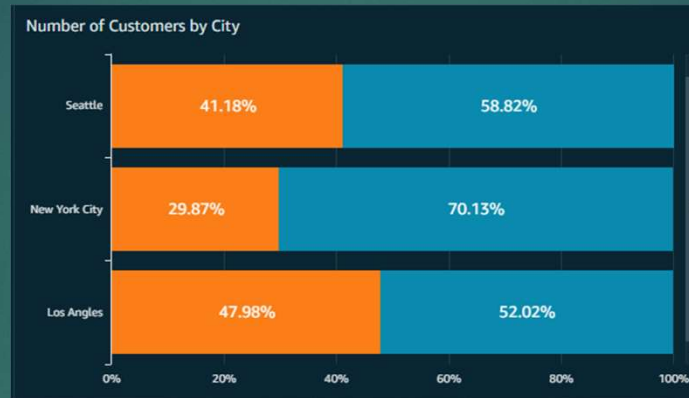
# CUSTOMER ANALYSIS

Q: WHO WERE OUR CUSTOMERS?

- Gender
- Location
- Login Profile

CUSTOMER PROFILE - GENDER

Number of Customers by Gender

Female 43%

65.376K

Male 57%

Number of Customers by City

Seattle	41.18%	58.82%
New York City	29.87%	70.13%
Los Angles	47.98%	52.02%

0%   20%   40%   60%   80%   100%

% Total Sales by City and Gender

Seattle	41.03%	58.97%
New York City	30.75%	69.25%
Los Angles	47.71%	52.29%

0%   20%   40%   60%   80%   100%

Total Sales ($) distributed by Gender

Female 115.23M (43%)

Male 153.57M (57%)

Size: Amount US$ (Sum)

- Men were the majority in total number of customers (57%). They also dominated when customers were distributed geographically, especially in New York City, male took the major portion of 70%. Only in Los Angles, the share between male and female seemed to be equivalent.

- It is not surprised that men contributed 57% towards the total sales with more than $153M while women only spent $115M.

- The shares in gender also presented via total spending in each city.

CUSTOMER PROFILE - SALES VS GENDER

Daily Trend in Total Sales (US$) by Gender
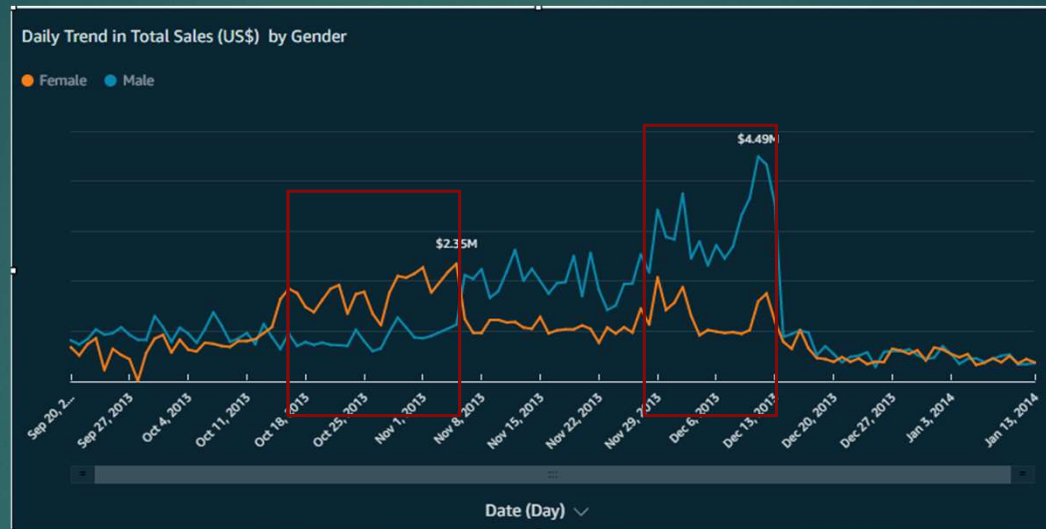
- Women started shopping and spent most in the last half of October to the first week of November then decreased their spending still the end of November waiting for the men when began their spending towards the first 13 days of November.

- Both decreased their spending after the week of December 8.

➢ *Women seems to prepare for holiday earlier but men dominate the spending towards total Sales.*

CUSTOMER PROFILE – LOGIN STATUS

Total Number of Customers by Login Status

Total Number of Customer login as New/First SignUp/Guest
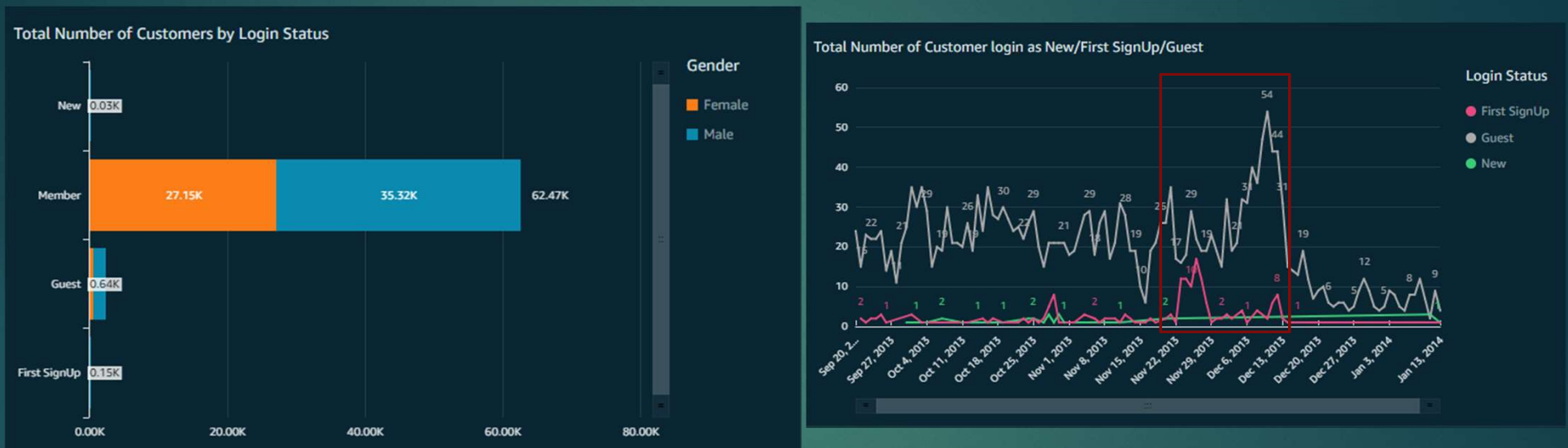
- The majority of customers was Member with the larger share was male.
- We have only 30 New customers (29 F 1M) and more than 180 First SignUp (185 total with 80% F)
- A number of Guests log into system everyday, these profiles also jumped the time rushed for Holiday from the end of November to about Dec 13.

LOOK INSIDE PRODUCTS

- WHICH WERE THE TOP CHOICE?

- Quantity vs revenues
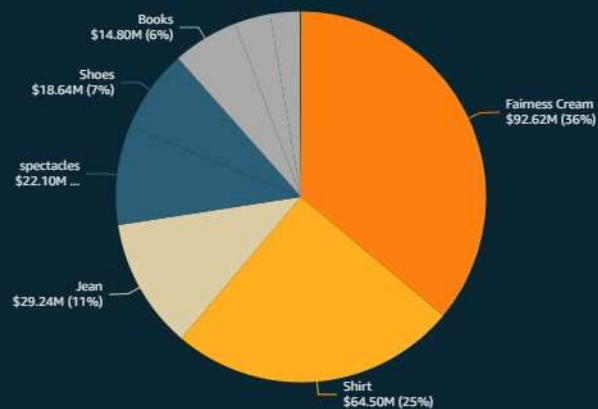
- Distributed by geography
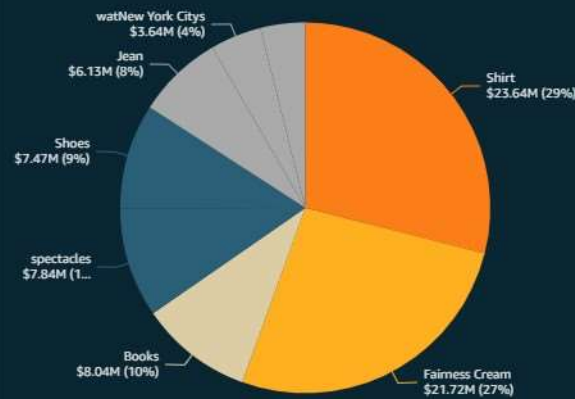
- Distributed by customers

TOP CHOICES OF PRODUCTS
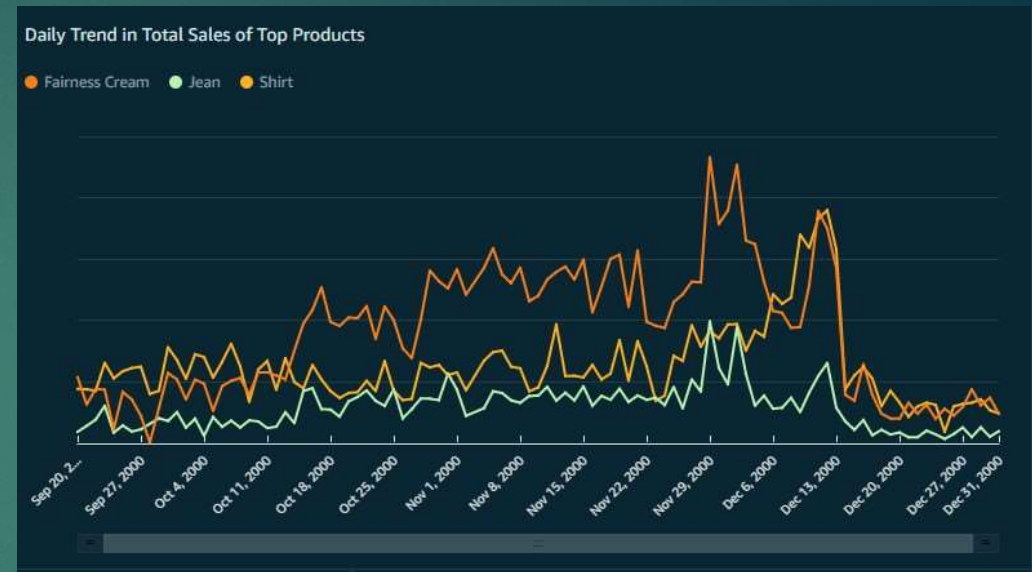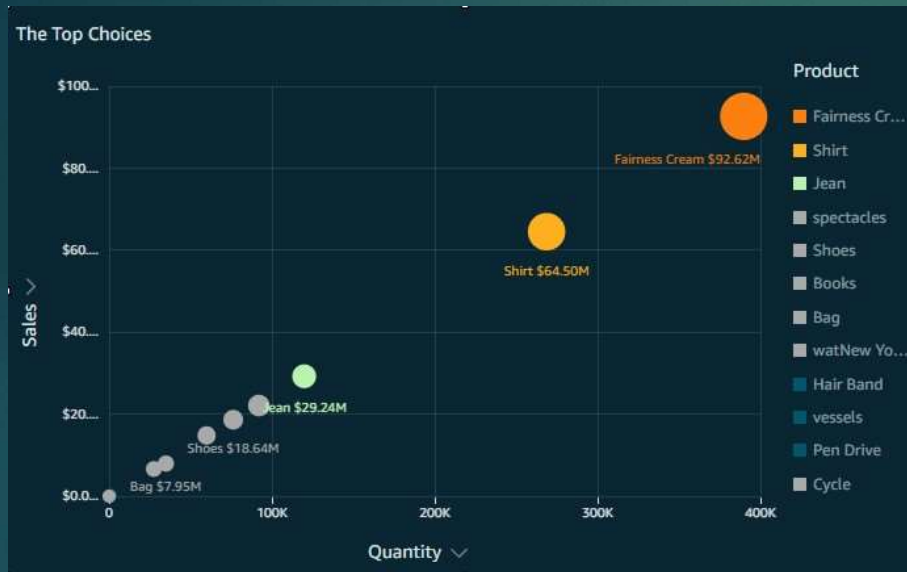
- Top 3 products towards the Total Sales were Fairness Cream($92M), Shirts ($64M) and Jeans ($29M).
- All of 3 had the uptrend in sales during the time preparing from Xmas holiday and also dropped after Dec 13-14.
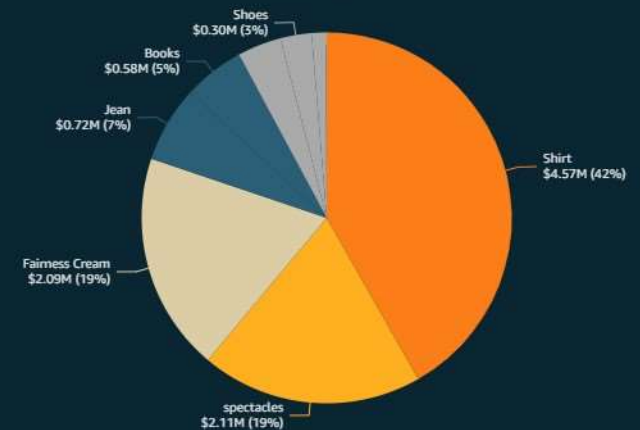
TOP CHOICES OF PRODUCTS - CITY

Porttion Sales of Products in Seattle

- Books $14.80M (6%)
- Shoes $18.64M (7%)
- spectacles $22.10M ...
- Jean $29.24M (11%)
- Shirt $64.50M (25%)
- Fairness Cream $92.62M (36%)

Portion Sales of Products in Los Angles

- watNew York Citys $3.64M (4%)
- Jean $6.13M (8%)
- Shoes $7.47M (9%)
- spectacles $7.84M (1...
- Books $8.04M (10%)
- Shirt $23.64M (29%)
- Fairness Cream $21.72M (27%)

Portion Sales of Product in New York City

- Shoes $0.30M (3%)
- Books $0.58M (5%)
- Jean $0.72M (7%)
- Fairness Cream $2.09M (19%)
- spectacles $2.11M (19%)
- Shirt $4.57M (42%)

- There was the differences in the preferable products across cities.

- While Top 3 for Seattle was Fairness Cream, Shirts and Jean. The people in Los Angle most picked Shirt, Fairness Cream and Books (surprised!). New York City spent most on shirts, spectacles and Fairness Cream (again!)

- *People in 3 cities shared the preferences over Fairness Cream!*

PRODUCT SALES DETAILS

Product Sales portions by Gender

Category	Product	Gender	Sales	% Total Category	% Total Sales
Accessories	Hair Band	Female	$0.18M	100.00%	0.07%
Clothing	Jean	Female	$29.24M	31.19%	11.39%
Clothing	Shirt	Male	$64.50M	68.81%	25.12%
Electronics	Pen Drive	Female	$0.03M	0.41%	0.01%
Electronics	watNew York Citys	Male	$6.62M	99.59%	2.58%
Fashion	Bag	Female	$7.95M	6.48%	3.10%
Fashion	Fairness Cream	Female	$52.99M	43.20%	20.64%
Fashion	Fairness Cream	Male	$39.63M	32.30%	15.43%
Fashion	spectacles	Male	$22.10M	18.02%	8.61%
House hold	vessels	Female	$0.07M	100.00%	0.03%
Vehicle	Cycle	Female	$0.01M	100.00%	0.00%
stationaries	Books	Male	$14.80M	100.00%	5.76%
wearables	Shoes	Female	$18.64M	100.00%	7.26%
			$256.76M	100.00%	100.00%

- Fairness Cream was known as the top choice products, here it stated that both Male and Female love the Fairness Cream.

- Besides that, it is ridiculous that only Female bought Jeans while Shirts were all owned by Male.

- Others to be noted, Male dominated the Electronics Sales and Books (huh?) while of course, women took all Shoes and Accessories.

- *Anyway, the data is quite not completed as most products are dominated by one gender.*

TRANSACTION MANAGEMENT
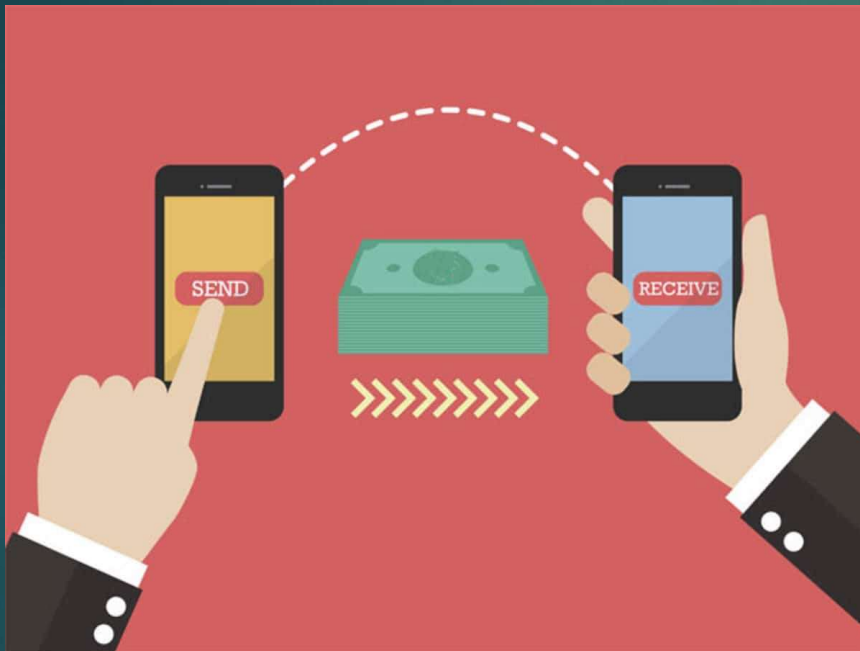
WHAT LEADED TO THE SUCCESSFUL TRANSACTIONS?

- Started and Done
- Timeline factors
- Distributed by customers
- Distributed by geography

GENDER- TIMELINE

- The shopping transactions seem to be never stopped all over a day.

- It had no major differences for Male and Female chosen their time for shopping. Again, in all time range, men took the vast on Sales.

- However, while people started over 62K transactions, only 86.6% were processed successfully. This ratio is not dissimilar by gender that the business need to collect more information about the reasons behind these kind of transactions.

THE MOST BUSY TIME RANGE

The busiest time in busiest day
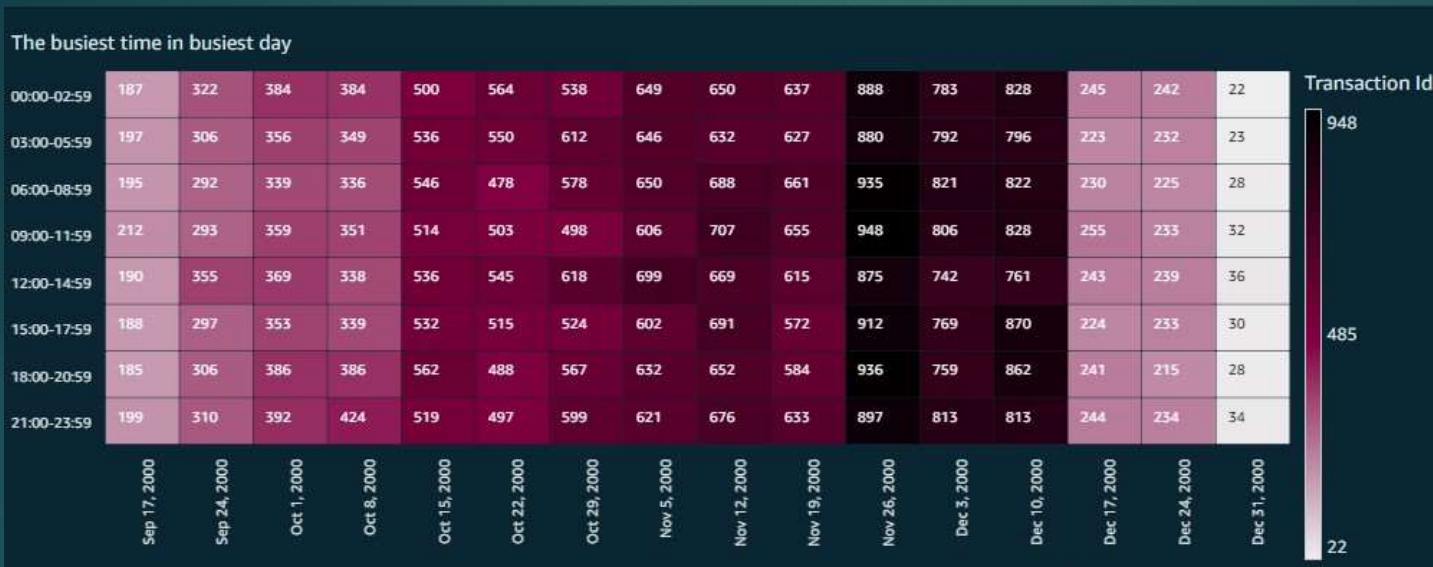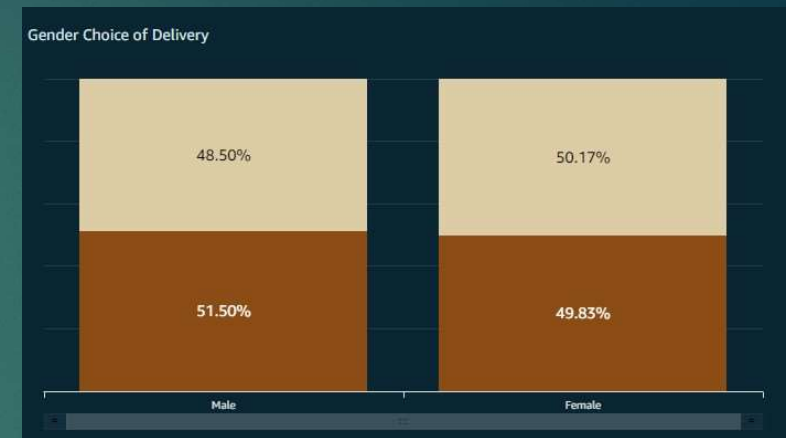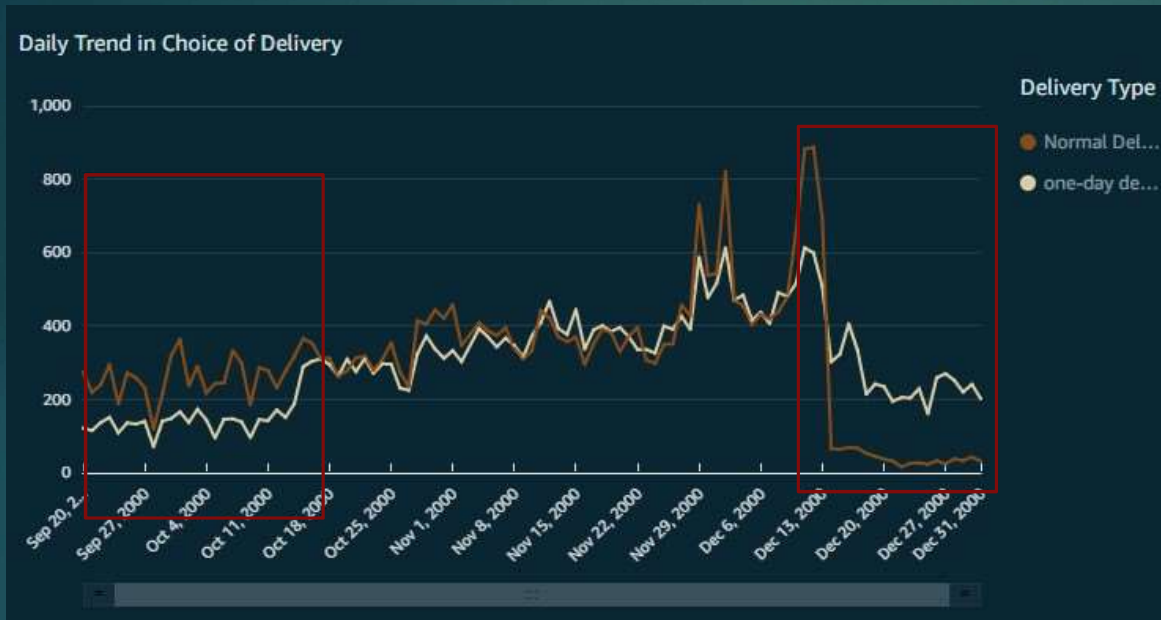
Top 3 Time_Range for total Sales are:
- **21:00-23:59** with $34.24M
- **00:00-02:59** with $34.09M
- **06:00-08:59** with $34.08M

Top 3 Time_Range for total count of Transaction_id are:
- **21:00-23:59** with 8,336
- **12:00-14:59** with 8,209
- **06:00-08:59** with 8,201

- The heat map presented the most busy time range with the most traffic days.
- It confirmed that the most traffic days were around October and November – there, again, had no distinctions in time range during a day.

DELIVERY CHOICE

Daily Trend in Choice of Delivery

Delivery Type
- Normal Del...
- one-day de...

Gender Choice of Delivery

- There was no gender effects on the choice of delivery type.
- The time line affected the choice of delivery that around the end of September and early October, major people chose the normal delivery but after December 13, rushed for the holiday, there was the sharply drop in the transactions with normal delivery but the majority preferred the one-day delivery.

DELIVERY CHOICE (cont.)

Delivery Choice over City

Device Type vs Delivery Type
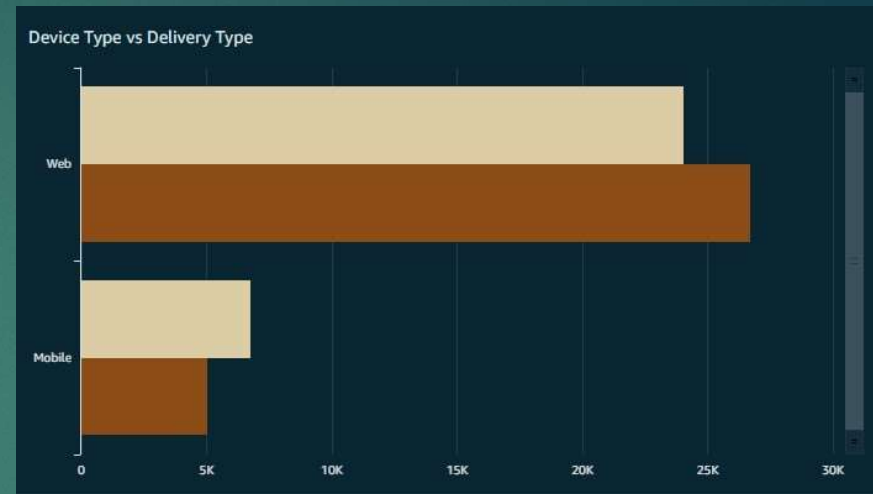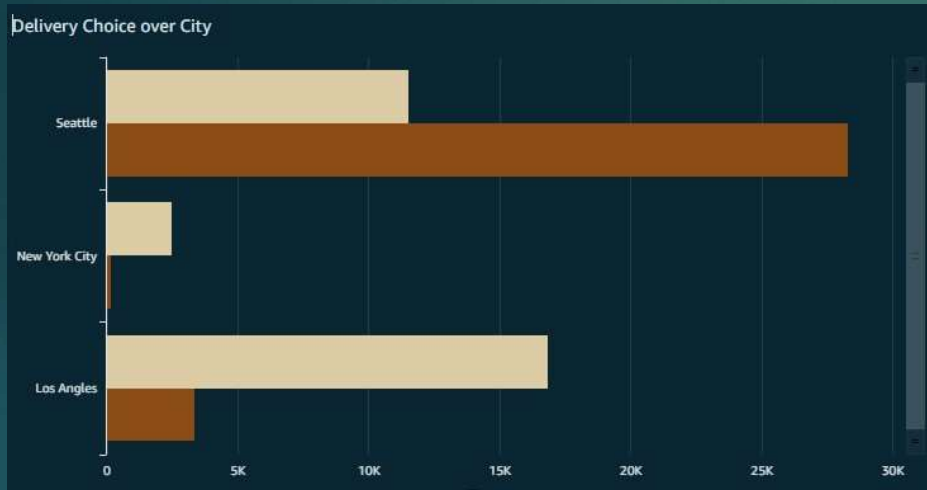
- The people in Seattle seemed to prefer Normal Delivery while other cities likely picked the one-day delivery.
- When people using Web Platform, they preferred the Normal Delivery but the people surfing on Mobile picked more one-day delivery.
- *It is important to note that there was vast majority of transactions on Web Platform compared to Mobile one. This should be analyzed more carefully as Mobile is the important part of ecommerce.*

MY CONCLUSIONS

- The dataset is quite small that could lead to unappropriated insights about US E-ecommerce.
- The total of about 100 days is quite short to forecast the near future of business.
- We could see the changes in sales during the time before Xmas and some interest insights about preferable products of men and women. However, I doubt the accurateness of these insights.

THANK YOU