Amazon Sales and Revenue Analysis

Detailed Project Report

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About the project

Sales management has gained importance to meet increasing competition and the need for improved methods of distribution to reduce cost and to increase profits. The objective of this project is to perform data analysis and visualisation and built dashboards to provide insights that can help in making data driven decisions to increase sales and revenue of the company.

About the data

The dataset is about the sales of electronic products from amazon platform in year 2019. Data is divided into 12 csv files and each file holds data for one month. The final dataset has following attributes :

- Order ID : Unique Order ID number per Order
- Product : Name of ordered Product
- Quantity Ordered : Number of Items Ordered
- Price Each : Price of one item (in $)
- Order Date : Date when order was placed
- City : City from where order was placed
- State : State from where order was placed
- Category : Category of the ordered Product

Data Transformation and EDA

Handling

Handling Null values :

- There are some rows which are having only null values, so dropping those rows from the dataset.

Deriving

Deriving Columns :

- City and State columns were derived from Purchase Address column.
- Category column was created based on the name of the Product in Product Column

3.Removing Unnecessary Columns :

After extracting City and State columns from Purchase Address Column, dropping the column from the dataset.

Creating Tables using M Language :

We have to create Cities, States and Dates Tables using Column from dataset for data modelling.

Cities Table

City_Id	City
1	Dallas
2	Boston
3	Los Angeles
4	San Francisco
5	Seattle
6	Atlanta
7	New York City
8	Portland (Oregon)
9	Austin
10	Portland

States Table

State_Id	State
1	Texas
2	Massachusetts
3	California
4	Washington
5	Georgia
6	New York
7	Oregon
8	Maine

Dates Table

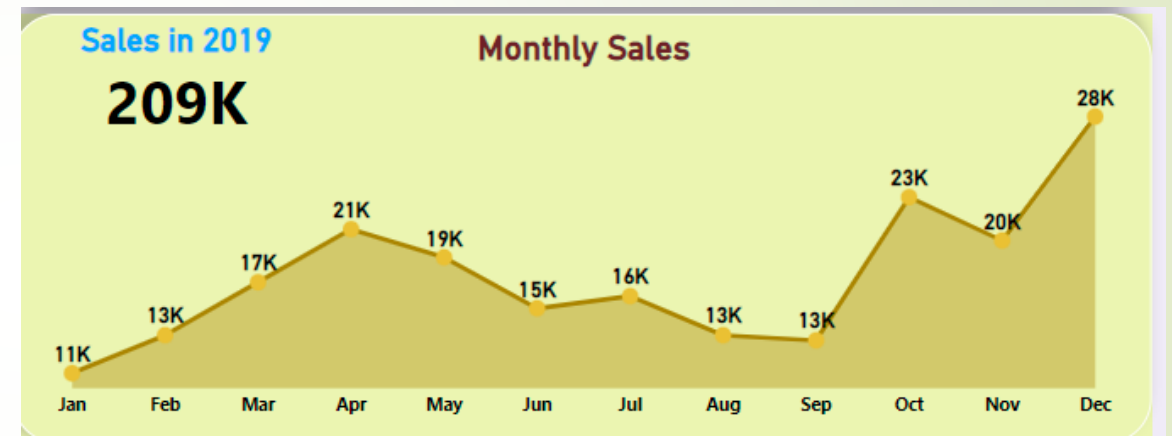| Month	MonthName	WeekDay	WeekName	Date	Month FullName
1	Jan	4	Wed	23-01-2019 08:54:00 PM	January
1	Jan	7	Sat	19-01-2019 10:25:00 AM	January
1	Jan	1	Sun	20-01-2019 03:12:00 PM	January
1	Jan	7	Sat	12-01-2019 07:02:00 PM	January
1	Jan	3	Tue	22-01-2019 11:53:00 AM	January
1	Jan	4	Wed	09-01-2019 05:19:00 PM	January
1	Jan	1	Sun	13-01-2019 06:05:00 AM	January
1	Jan	5	Thu	10-01-2019 07:52:00 PM	January
1	Jan	6	Fri	04-01-2019 07:50:00 PM	January
1	Jan	1	Sun	20-01-2019 08:15:00 PM	January
1	Jan	7	Sat	19-01-2019 08:31:00 PM	January
1	Jan	3	Tue	15-01-2019 03:07:00 PM	January

Visual Analytics and Key Insights

- From total sales of 209K products, 83.53K products were sold in California state which is 40% of total sales.
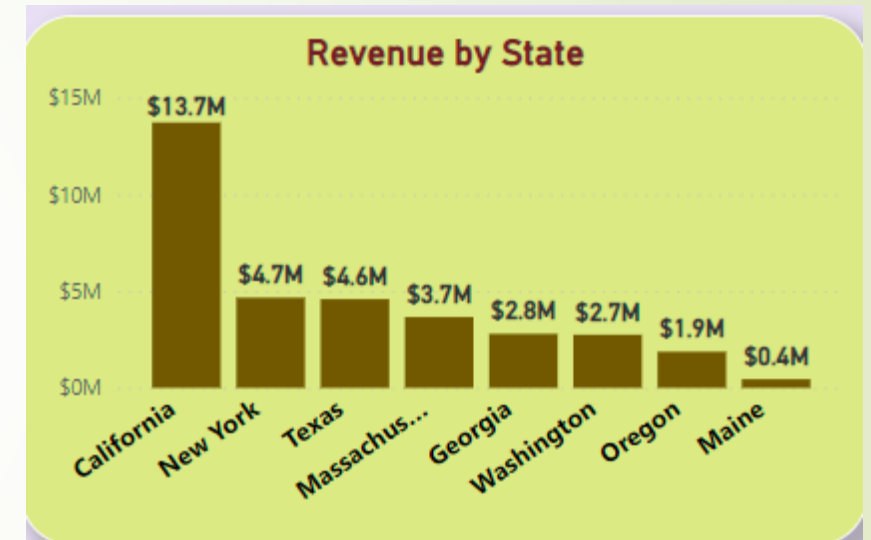

Sales by State

State	Sales
California	83.53K
New York	27.93K
Texas	27.88K
Massachusetts	22.53K
Georgia	16.60K
Washington	16.55K
Oregon	11.30K
Maine	2.75K
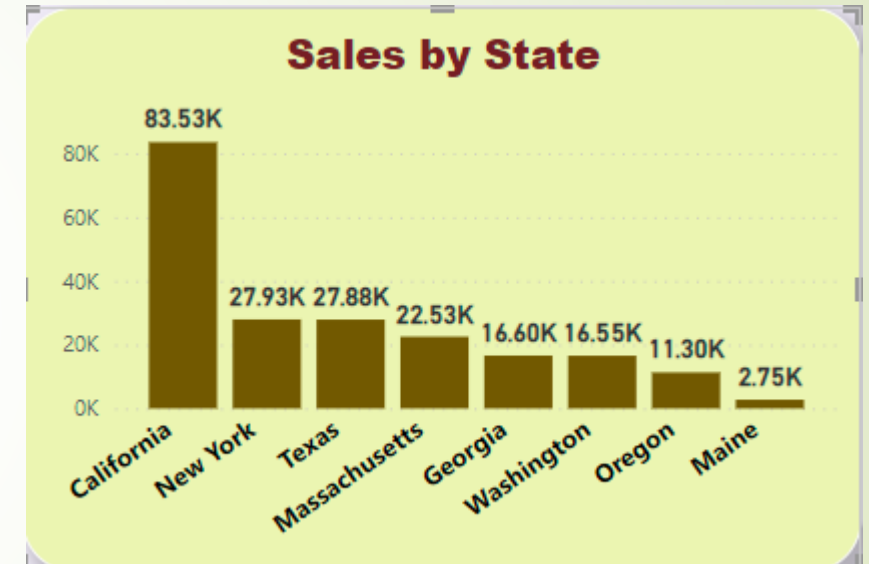
- Batteries, Headphones and Charging Cables are most frequently ordered product categories.

Top 5 Product Category

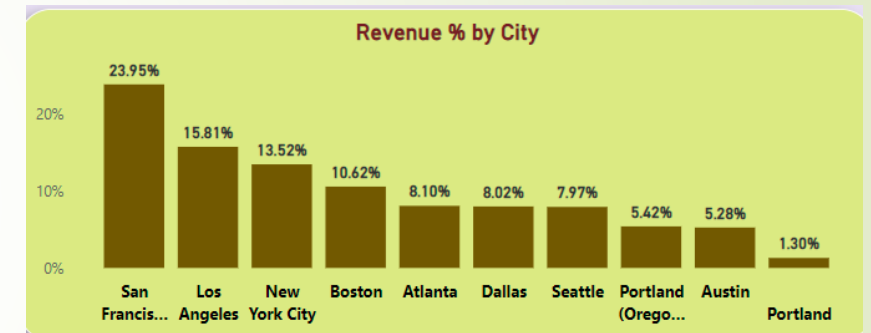| Category	Contribution % in Sales
Dryer	0.31%
Washing Machine	0.32%
TV	2.30%
Laptop	4.24%
Phone	6.91%
Monitor	11.54%
Charging Cable	22.57%
Headphones	23.76%

- 4th Quarter was best Quarter in terms of sales with 71K items sold whereas 1st and 3rd Quarters were worst and just sold 82K items combined.

Sales in 2019   Monthly Sales

209K

28K
23K
21K
20K
19K
17K
16K
15K
13K   13K   13K
13K
11K

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

- California state is biggest market which generates revenue of $13.7M which is 40% of total revenue.

Revenue by State

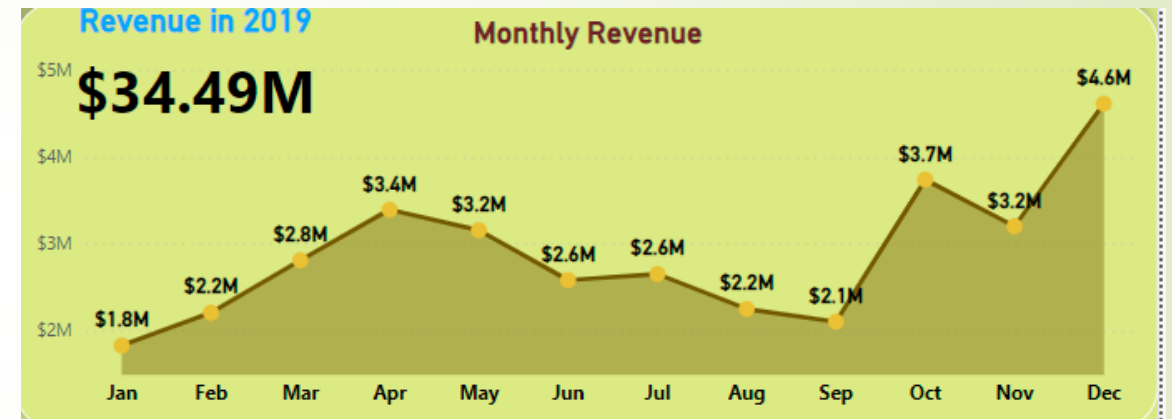| State	Revenue
California	$13.7M
New York	$4.7M
Texas	$4.6M
Massachus...	$3.7M
Georgia	$2.8M
Washington	$2.7M
Oregon	$1.9M
Maine	$0.4M

- San Francisco, Los Angeles and New York City are top 3 cities which generates $18.5M revenue which is 54% of total revenue of $34.5M.

Revenue % by City

23.95% San Francis...
15.81% Los Angeles
13.52% New York City
10.62% Boston
8.10% Atlanta
8.02% Dallas
7.97% Seattle
5.42% Portland (Orego...
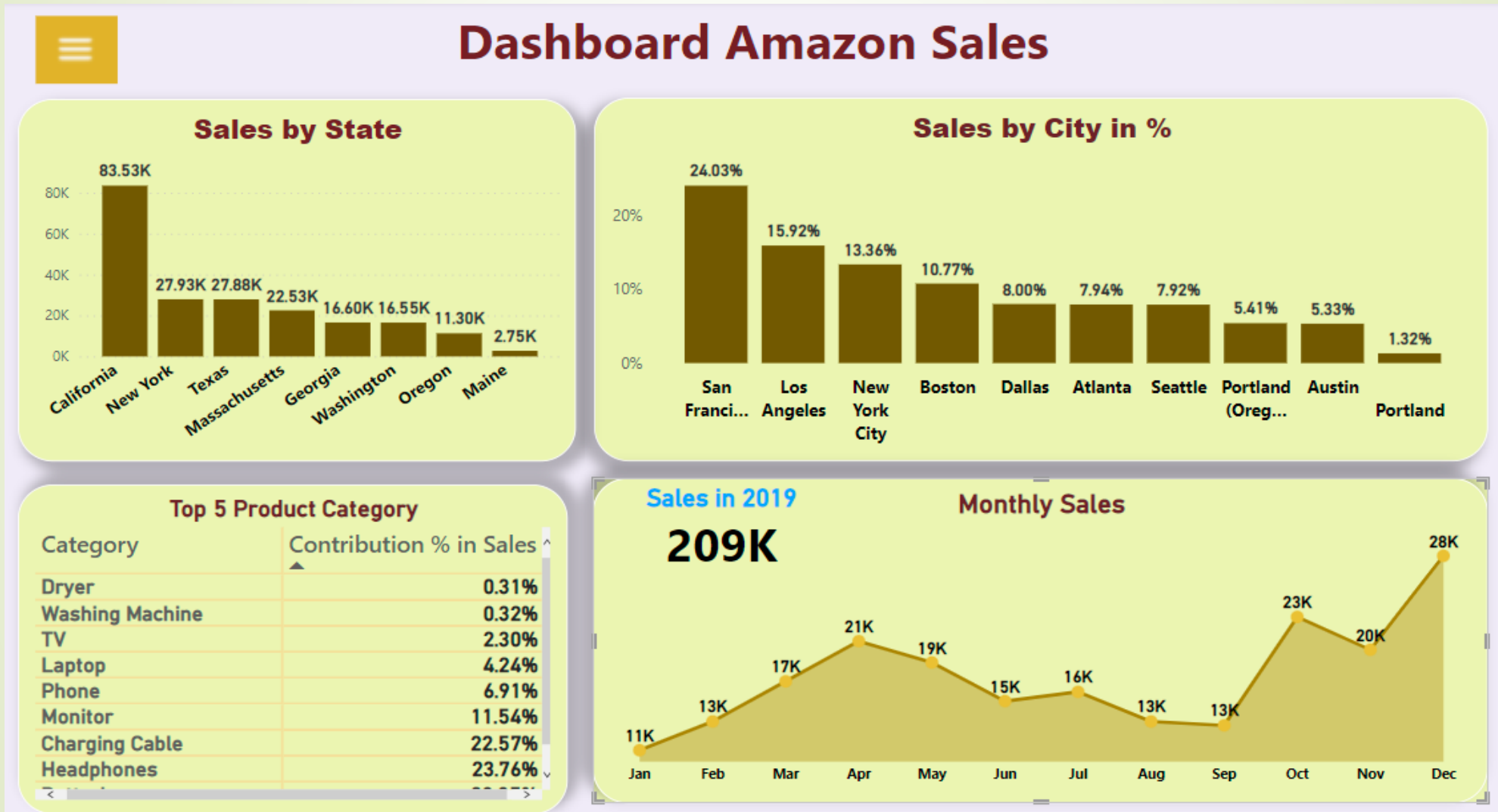5.28% Austin
1.30% Portland

Laptop, Phone and Monitor are top 3 revenue generating Product Categories and generates $27.6M revenue which is almost 80% of total revenue.

Top 5 Product Category	
Category ▲	Contribution % in Revenue
Batteries	0.58%
Charging Cable	1.84%
Dryer	1.12%
Headphones	11.43%
Laptop	35.28%
Monitor	18.49%
Phone	25.92%
TV	4.19%

January, February, August and September are months which generates least revenue and too much below the average monthly revenue of $2.9M.

Revenue in 2019
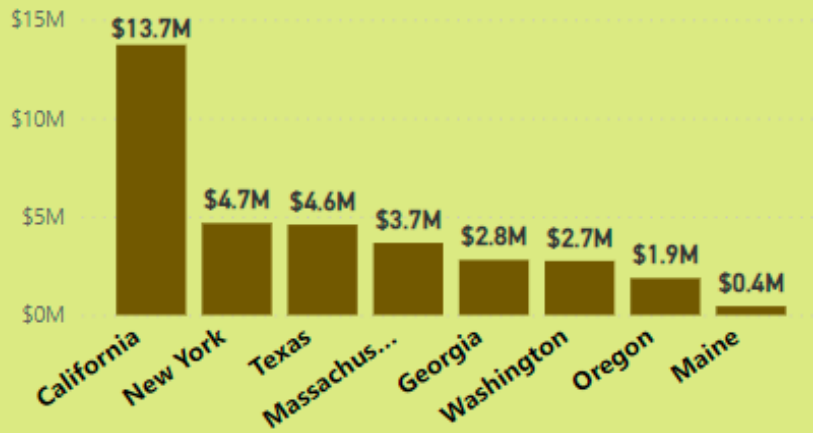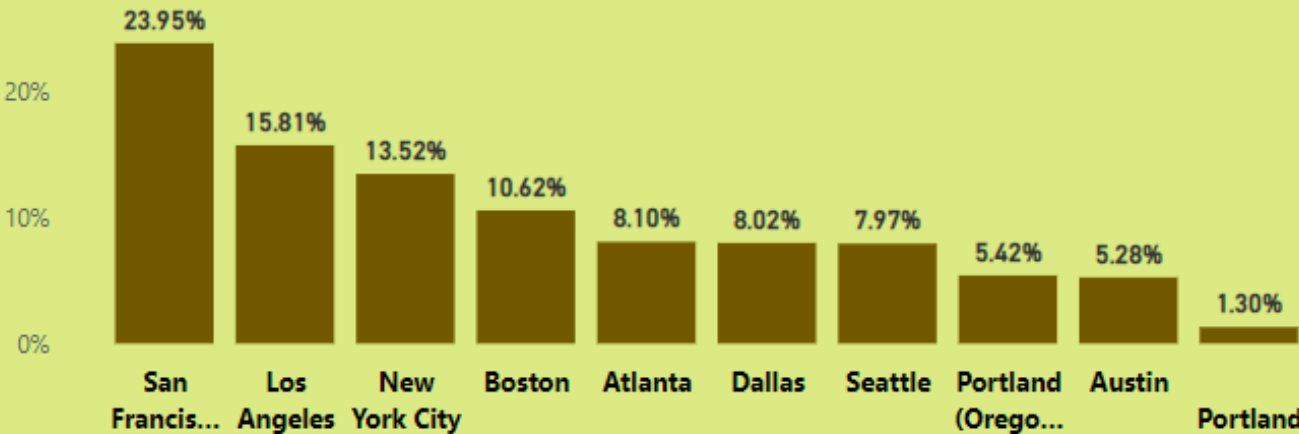
Monthly Revenue

$34.49M

$5M
$4M
$3M
$2M

$1.8M | $2.2M | $2.8M | $3.4M | $3.2M | $2.6M | $2.6M | $2.2M | $2.1M | $3.7M | $3.2M | $4.6M

Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec

Dashboards

Amazon Revenue Dashboard

Revenue by State

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New York	$4.7M
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Massachus...	$3.7M
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Oregon	$1.9M
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Revenue % by City

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Top 5 Product Category

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Monthly Revenue

Revenue in 2019

$34.49M

$1.8M, $2.2M, $2.8M, $3.4M, $3.2M, $2.6M, $2.6M, $2.2M, $2.1M, $3.7M, $3.2M, $4.6M

Thank You