

# DataMingle: Trends Unveiled

Thien Lam

December 12, 2023

# Table of contents

## 1 Introduction

## 2 Overview

- Key metrics
- Trend Analysis
- Data Visualization

## 3 Conclusion

# Introduction

Analyze sales data for the four quarters (12 months) to assess the company's quarterly sales performance.

- How have quarterly sales revenues trended over the past year?
- What were the top-selling products in each quarter?
- Are there any seasonality trends in the sales data?

This will present the process of extracting valuable insights from raw data, enabling informed decision-making. It involves acquiring, organizing, cleansing, storing, modeling, and analyzing data to reveal meaningful patterns. I use these tools.

- SQL
- Power BI
- Python

# Key metrics

	Order ID	Product	Quantity Ordered	Price Each	Order Date	Purchase Address
count	372610	372610	372610	372610	372610	372610
unique	178438	20	10	24	142396	140788
top	Order ID	USB-C Charging Cable	1	11.95	Order Date	Purchase Address
freq	710	43806	337104	43806	710	710

Figure: Key Metrics

# Data Structure

	Order ID	Product	Quantity Ordered	Price Each	Order Date	Purchase Address
0	176558	USB-C Charging Cable	2	11.95	04/19/19 08:46	917 1st St, Dallas, TX 75001
1	NaN	NaN	NaN	NaN	NaN	NaN
2	176559	Bose SoundSport Headphones	1	99.99	04/07/19 22:30	682 Chestnut St, Boston, MA 02215
3	176560	Google Phone	1	600	04/12/19 14:38	669 Spruce St, Los Angeles, CA 90001
4	176560	Wired Headphones	1	11.99	04/12/19 14:38	669 Spruce St, Los Angeles, CA 90001
...	...	...	...	...	...	...
373695	259353	AAA Batteries (4-pack)	3	2.99	09/17/19 20:56	840 Highland St, Los Angeles, CA 90001
373696	259354	iPhone	1	700	09/01/19 16:00	216 Dogwood St, San Francisco, CA 94016
373697	259355	iPhone	1	700	09/23/19 07:39	220 12th St, San Francisco, CA 94016
373698	259356	34in Ultrawide Monitor	1	379.99	09/19/19 17:30	511 Forest St, San Francisco, CA 94016
373699	259357	USB-C Charging Cable	1	11.95	09/30/19 00:18	250 Meadow St, San Francisco, CA 94016

Figure: Data Structure

# Monthly Revenues

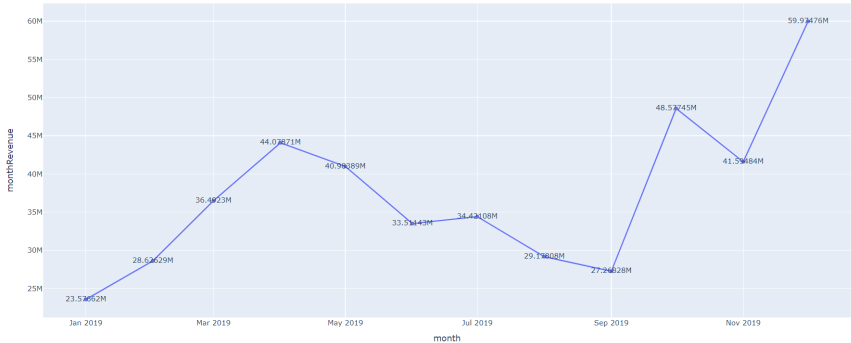


Figure: Monthly Revenue Trend

# Quarterly Revenues

- ① 2019Q1: 13.64542M
- ② 2019Q2: 18.24216M
- ③ 2019Q3: 13.97961M
- ④ 2019Q4: 23.09955M



# Sales Products Grouped by Cities

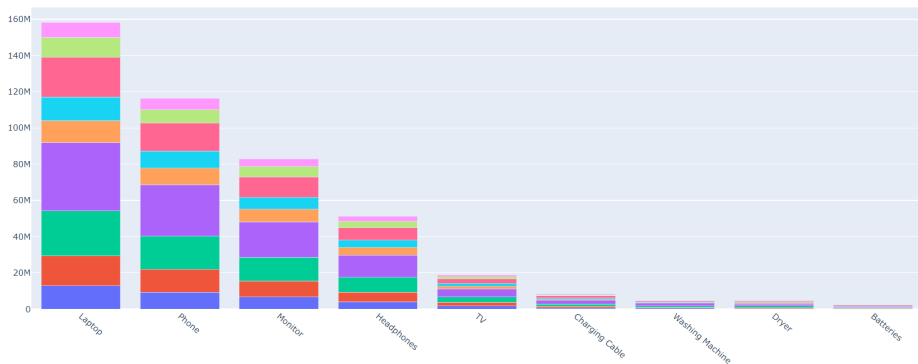


Figure: Sales Products Grouped by Cities

# Products Sales Distribution



Figure: Sales Products Grouped by Categories

# Products Sales Distribution

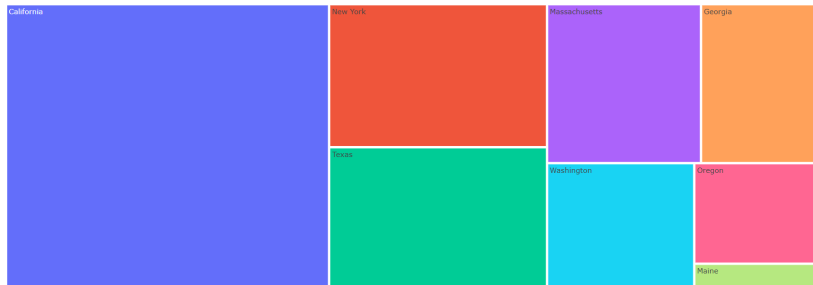


Figure: Sales Products Grouped by States

# Conclusions

- Seasonal effects significantly influence our sales data, with prominent spikes occurring during the second and fourth quarters.
- The largest proportion of our revenue is attributed to the sales of laptops.

# Conclusions

- Seasonal effects significantly influence our sales data, with prominent spikes occurring during the second and fourth quarters.
- The largest proportion of our revenue is attributed to the sales of laptops.
- A noteworthy observation is that the majority of our products were sold in the state of California.

# Conclusions

- Seasonal effects significantly influence our sales data, with prominent spikes occurring during the second and fourth quarters.
- The largest proportion of our revenue is attributed to the sales of laptops.
- A noteworthy observation is that the majority of our products were sold in the state of California.
- These insights shed light on the dynamics of our sales and distribution patterns.

# Conclusions

- Seasonal effects significantly influence our sales data, with prominent spikes occurring during the second and fourth quarters.
- The largest proportion of our revenue is attributed to the sales of laptops.
- A noteworthy observation is that the majority of our products were sold in the state of California.
- These insights shed light on the dynamics of our sales and distribution patterns.