



# **AMAZON**

**Capstone Project**

# Introduction

- In this SQL Capstone project, we conducted a thorough analysis of Amazon's sales data from three branches in Mandalay, Yangon, and Naypyitaw. Our primary objectives were to understand product performance, sales trends, and customer behavior. Through data cleaning, feature engineering, and exploratory analysis, we identified top-selling product lines, customer segments contributing to revenue, and branch-specific sales patterns.



# Business Problem



- The business problem addressed by this project is the need for Amazon to optimize its sales performance and customer targeting strategies across different branches and product lines. Specifically, Amazon seeks to understand which product lines are driving the highest sales and profitability, identify key customer segments contributing to revenue, and determine effective sales strategies that can be tailored to specific branches and customer types.

# Data collection & Understanding

## Data Source:

Used secondary data source for data collection like excel.

## Dataset Overview:

Contains 1000 transactions across three cities (Mandalay, Yangon, Naypyitaw) with 17 variables including invoice\_id, branch, product\_line, customer\_type, product\_line, unit\_price, quantity, vat, total, date, time, payment\_method, cogs, gross\_margin\_percentage, gross\_income, rating.

## Columns Added:

Added three extra columns for better analysis.

- i. Day\_name
- ii. Month\_name
- iii. Time\_of\_day

# Product Analysis

- **There is six product :**

1. Food and beverages
2. Sports and travel
3. Electronic accessories
4. Fashion and accessories
5. Home and lifestyle
6. Health and beauty

❖ When we consider different metrics with respect to product line its clear that “ **Food and beverages** ” has a highest Total Sales and Avg Rating.

❖ Where “**Health and beauty**” is lowest in all the categories when compared with different metrics with respect to product line.

Product_line	round(sum(total))	AverageRating
Health and beauty	49194	7.00
Home and lifestyle	53862	6.84
Fashion accessories	54306	7.03
Electronic accessories	54338	6.92
Sports and travel	55123	6.92
Food and beverages	56145	7.11



# According to Location

branch	product_line	round(sum(tota
C	Food and beverages	23767
A	Home and lifestyle	22417
C	Fashion accessories	21560
B	Sports and travel	19988
B	Health and beauty	19981
A	Sports and travel	19373
C	Electronic accessories	18969
A	Electronic accessories	18317
B	Home and lifestyle	17549
A	Food and beverages	17163
B	Electronic accessories	17051

## ❑ Branch A | Location : Yangon |

- Highest Sales : Home and lifestyle – 22,417
- Lowest Sales : Health and beauty – 12,598

## ❑ Branch B | Location : Mandalay |

- Highest Sales : Sports and travel – 19,988
- Lowest Sales : Food and beverages – 15,215

## ❑ Branch C | Location : Naypyitaw |

- Highest Sales : Food and beverages – 23,767
- Lowest Sales : Home and lifestyle – 13,896

# Sales Analysis

- **According to product :**

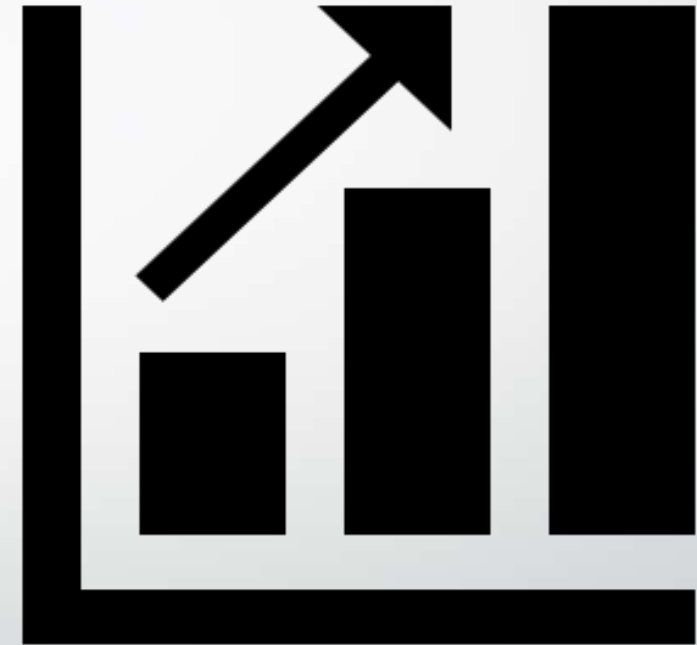
Most sold product line is “**Food and beverages**” least is “**Health and beauty**” but it has overall good average rating.

- **According to month :**

**January** month has the highest sales which is “11,62,92”  
And less in **February** which is “97219”.

- **According to weekday**

**Saturday** is the busiest day of the week and  
**Monday** is the quietest day of the week .



# Sales Analysis

- **According to Time of day :**

On the **Afternoon** has the highest sale which is 454

And less sales in **Morning** which is 191 and **Evening** has a good amount of sale which is 355.

- **According to city :**

There is three city Mandalay, Naypyitaw and Yangon.

**Naypyitaw** city has generated highest revenue which is "1,10,569" and

**Mandalay** city has generated lowest revenue Which is "1,06,198".





# Customer Analysis

- According to Customer type :

There is two type of customer **Member** and **Normal**. **Member** has generated more revenue and also ordered most number of time.

Customer_Type	TotalRevenue
Member	164223.44400
Normal	158743.30500

- According to Gender :

**Female** has generated more revenue which is **1,67,883**.

gender	TotalRevenue
Female	167883
Male	155084

- Most product categories order by gender :

Female - Fashion and accessories

Male - Health and beauty

gender	product_line	TotalRevenue
Female	Food and beverages	33171
Male	Health and beauty	30633

# Suggestions :

- A. Product Focus:** Enhance and diversify offerings in "Food and Beverages" to maintain strong sales. Improve "Health and Beauty" with promotions and new products.
- B. Location-based Sales:** Invest more in Naypyitaw due to high revenue potential. Customize offerings to fit local preferences.
- C. Customer Engagement:** Offer personalized loyalty programs for members. Expand product interest among female customers beyond fashion.
- D. Sales Timing:** Allocate resources effectively during peak times (like January and Saturdays) to maximize sales.
- E. Customer Satisfaction:** Focus on product quality and gather feedback for continuous improvement.



Thank you