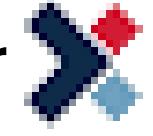




PT. Inixindo Persada Rekayasa Komputer



TES DATA SCIENCE

# CUSTOMER SEGMENTATION

UNLOCKING INSIGHTS FROM DATA

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- JUNIOR DATA SCIENTIST -

check this out: [github](#) - [code](#) [python](#)



## Objective

- Perform Customer Segmentation to understand customer behavior and preferences, contributing to better decision-making for the company.

## Background

- Understanding customer needs and preferences is crucial for business success. Customer Segmentation helps identify distinct customer groups based on behavior and characteristics, leveraging sales data for valuable insights.



# Dataset Overview

- We have various datasets including sales, product, geography, and reseller information, each containing specific details such as sales transactions, product information, and customer demographics.



# Customer Segmentation Process



## Data Understanding

Review datasets to identify key features for segmentation such as order quantity, sales amount, and customer demographics.



## Data Preprocessing

Clean the data by removing missing values, handling duplicates, and ensuring consistency.



## Data Analysis

Analyze customer purchasing patterns and behaviors using Python libraries for statistical analysis and visualization.



## Customer Segmentation

Apply clustering algorithms like K-Means to segment customers based on purchasing behavior.

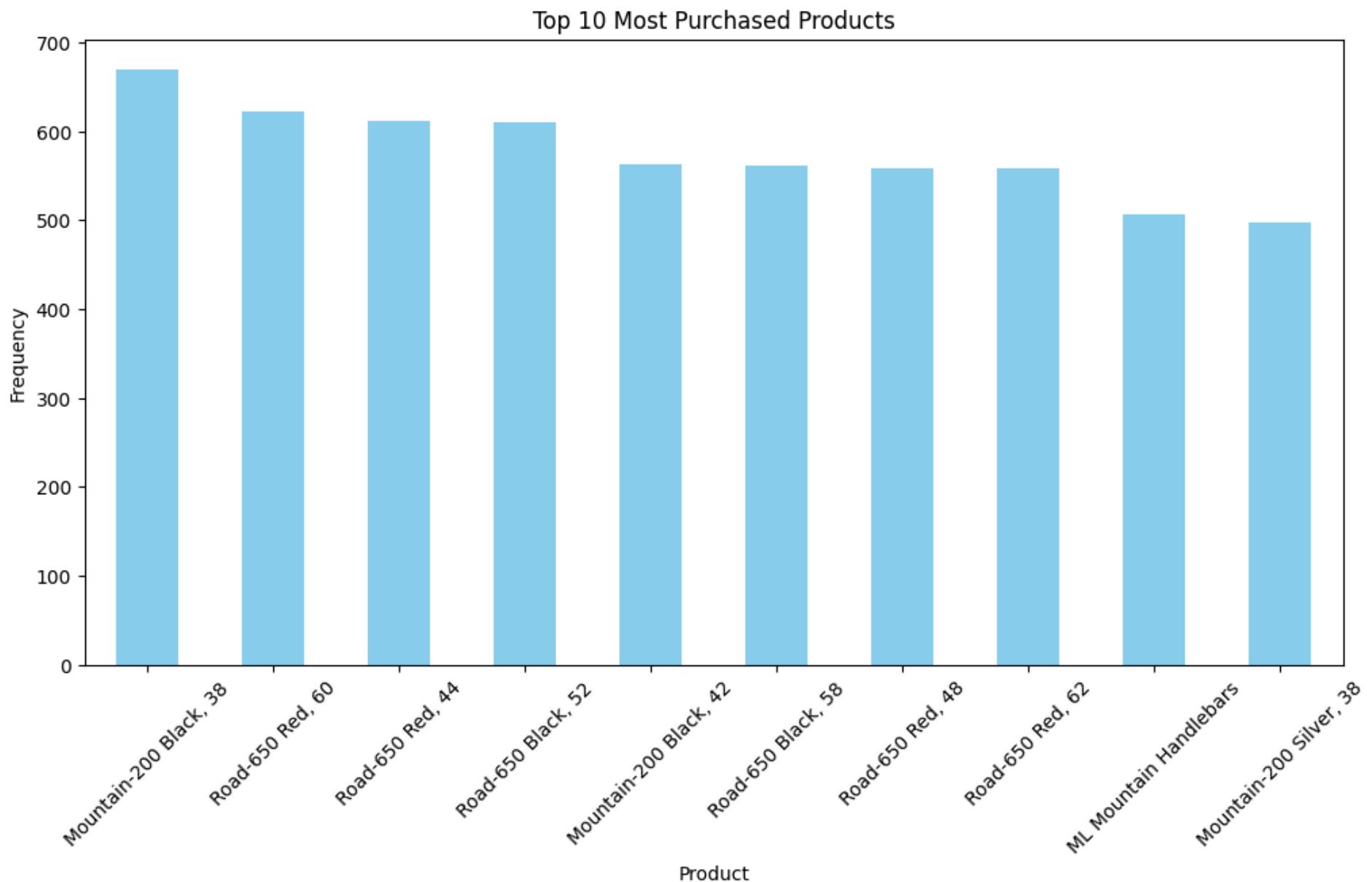
# Visualization & Insights

## 1. Top 10 Most Purchased Products

- This analysis helps in understanding which products are driving sales and can inform inventory management and marketing strategies.

- Insights:**

From the visualization of the most frequently purchased products, we can identify the top-selling items preferred by customers.



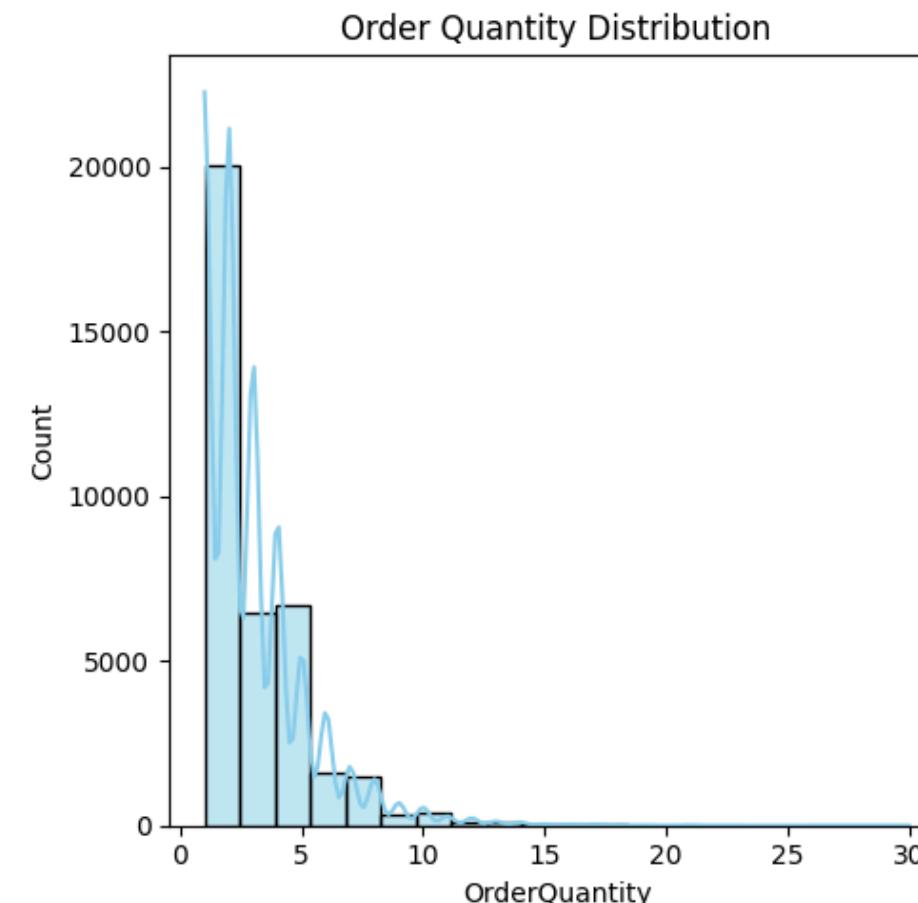
# Visualization & Insights

## 1. Order Quantity Distribution

shows how many orders are placed for different quantities.

- **Insights:**

Can guide inventory planning and identify opportunities for upselling or bundling products.

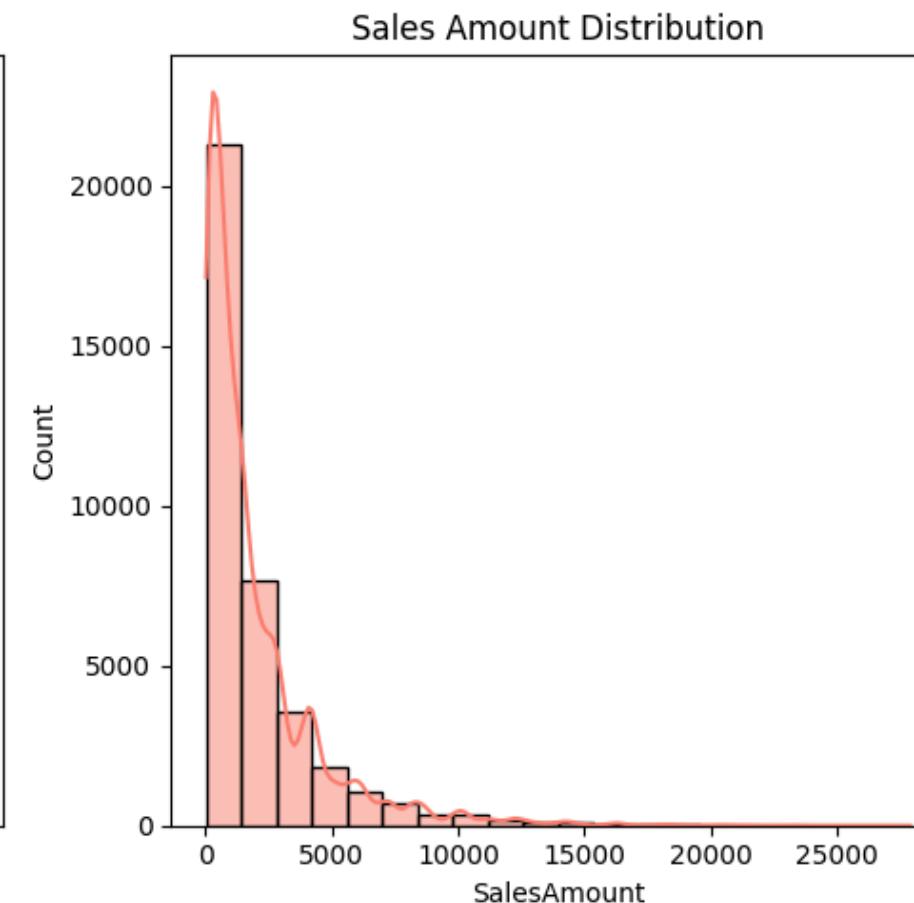


## 1. Sales Amount Distribution

helps identify the range and distribution of purchase values.

- **Insights:**

aids in setting pricing strategies, identifying outliers, and understanding customer spending habits.

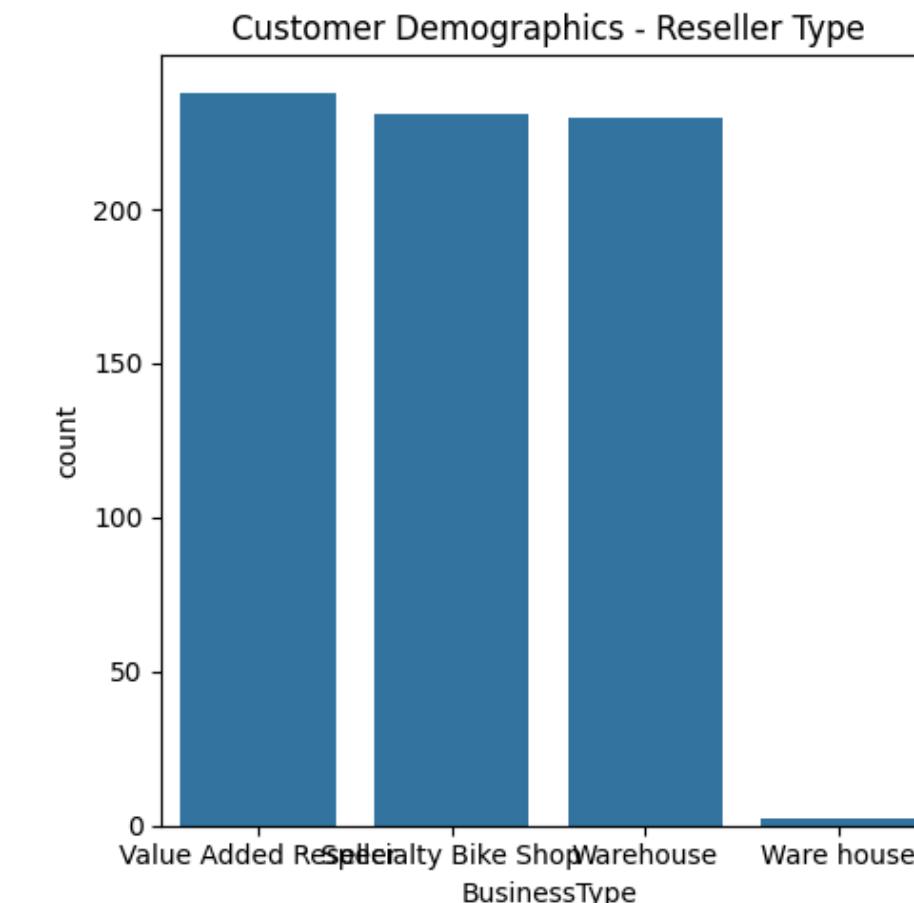


## 1. Customer Demography - Reseller Business Type

provides insights into the distribution of customers based on their business types.

- **Insights:**

Can be used to tailor marketing and sales strategies for different types of reseller.



# Visualization & Insights

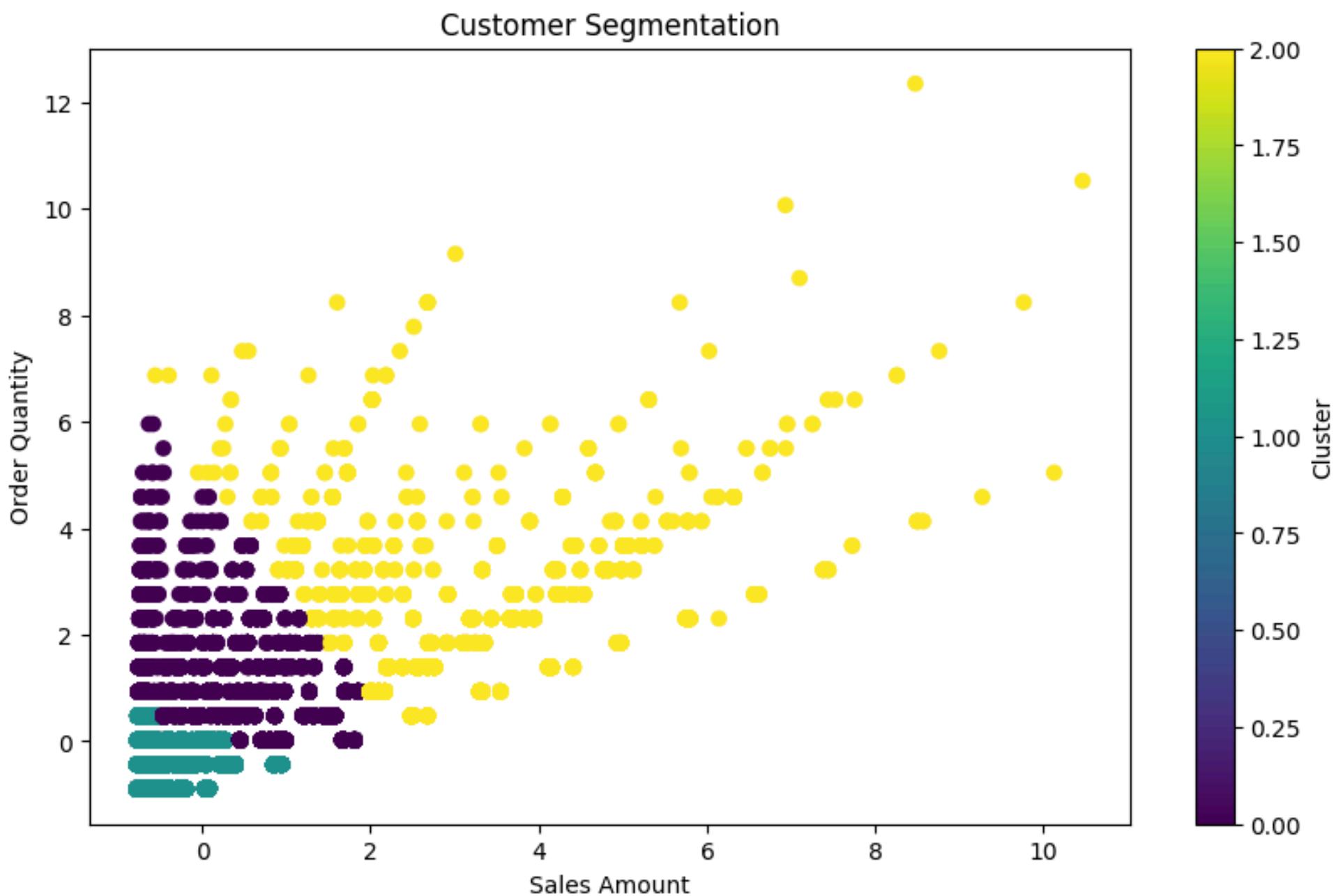
## 1. Customer Segmentation by Sales Amount vs Order Quantity

- This provides insights into purchasing behavior.
- Higher sales amounts with lower order quantities may indicate premium purchases, while lower sales amounts with higher order quantities may represent bulk purchases or discounts.

### • Insights:

Three customer groups:

- Cluster 0: Customers with low total purchases
- Cluster 1: Customers with moderate total purchases
- Cluster 2: Customers with high total purchases



# Visualization & Insights

## 1. Customer Segmentation by Sales Amount by Reseller

- Visualizing sales amount by reseller type provides insights into how different types of resellers contribute to overall sales.
- This analysis helps identify which reseller types are driving the most revenue and where potential growth opportunities lie.

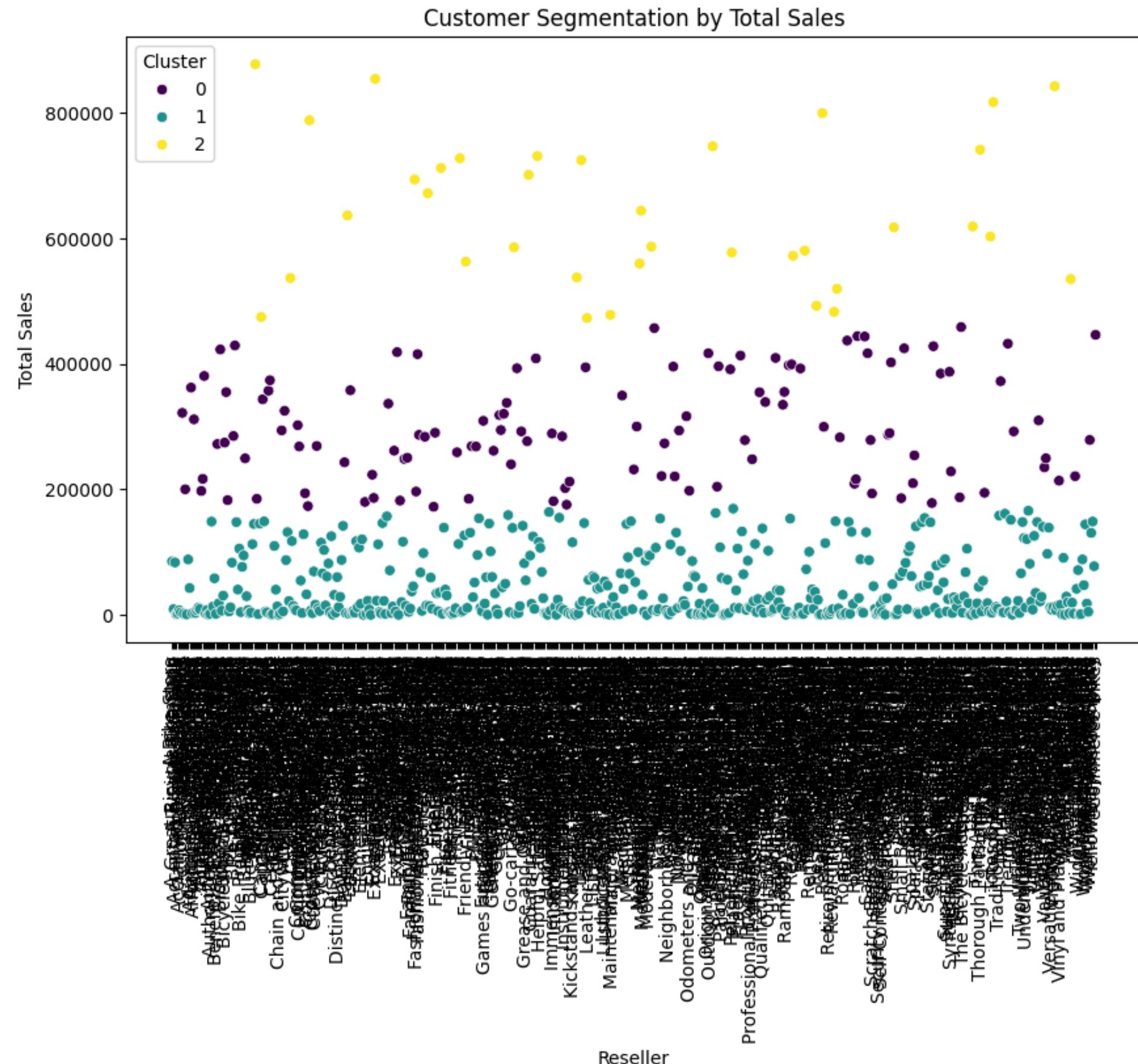
- **Insights:**

Identify three customer groups based on total purchases:

Cluster 0: Customers with low total purchases

Cluster 1: Customers with moderate total purchases

Cluster 2: Customers with high total purchases



# **Customer Segmentation Analysis:**

- Through customer segmentation, we identify distinct groups of customers with similar traits.
- Insights include high-value customers, frequent buyers, and product preferences.
- Understanding these segments helps in targeted marketing and product recommendations.

# **Insights & Recommendations:**

- Cluster 0: Requires more aggressive marketing strategies to increase purchasing activity.
- Cluster 1: Can be targeted for marketing strategies aimed at increasing shopping value.
- Cluster 2: Needs focus on customer retention and development strategies to maintain their revenue contribution.

# Decision Making

- Customer Segmentation insights contribute to better decision-making by tailoring strategies and offerings based on segmented groups.
- By understanding the top purchased products, sales amount vs order quantity, and customer demographics such as reseller type, the company can make informed decisions on product stocking, pricing, and marketing strategies.

## Conclusion

- Customer Segmentation provides valuable insights into behavior and preferences, optimizing business strategies and improving customer satisfaction.
- Through visualizations and analysis of top products, sales patterns, and customer demographics, we gain a deeper understanding of our customer base, enabling us to make data-driven decisions that drive growth and profitability.



# Recommendations based on Segmentation Results

- **Develop More Targeted Marketing Strategies:** Tailor marketing efforts based on insights from customer segments to increase effectiveness.

**Example:** If segmentation shows that Cluster 0 tends to purchase product X, marketing strategies can focus on promoting product X to customers in that segment, while Cluster 2 may be more responsive to promotions for product Y.

- **Personalize Customer Experience:** Use customer segmentation insights to personalize interactions and offerings, enhancing customer satisfaction and loyalty.

**Example:** If Cluster 1 frequently purchases product A, they may receive recommendations for similar products when shopping online or special offers tailored to their preferences.

- **Optimize Products and Services:** Adjust product offerings and services based on top-purchased products and customer preferences.

**Example:** If data shows that product B is frequently purchased across all segments, the company may decide to increase the stock of product B or develop related product variants

- **Develop Appropriate Loyalty Programs:** Design loyalty programs that resonate with different customer segments, encouraging repeat purchases and customer retention.

**Example:** Offering exclusive discounts to loyal customers in Cluster 2, while it may be more effective to offer point rewards or special gifts for every purchase to customers in Cluster 0.



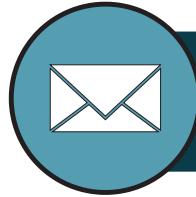
# THANK YOU FOR YOUR ATTENTION



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Riska Amylatul Askiyah

riskaamylatulaskiyah/  
**Customer...**



This repository contains the project materials for Customer Segmentation, aimed at unlocking insights from sales data to understand customer behavior...

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Contributor

0

Issues

0

Stars

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Forks

**riskaamylatulaskiyah/Customer-Segmentation\_PT-Inixindo: This repository contains the project materials...**

This repository contains the project materials for Customer Segmentation, aimed at unlocking insights from sales data to understand customer behavior and preferences. The project encompasses data a...

GitHub