Rakamin Academy X Bank Muamalat

Sales Report

PT Sejahtera Bersama

Business Intelligence Analyst

Presented by
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About You

A fresh graduate in Data Science with high interest artificial intelligence, data science, and business analytics. Experienced in data cleaning, exploratory data analysis, visualization, machine learning, and basic deep learning through academic, bootcamps, courses, and personal projects.

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Relevant Links

Website Portfolio
azizprabowo.com

Linkedin
linkedin.com/in/aziz-prabowo

GitHub
github.com/azizp128

Background

PT Sejahtera Bersama is a retail company engaged in selling robotics, drones, and supporting products across various cities in the United States. With a diverse product portfolio and a growing customer base, the company faces challenges in monitoring sales performance and identifying areas of opportunity. Currently, sales performance varies significantly across cities and product categories, making it essential to gain a clear picture of which regions and products contribute most to revenue and order volume. By leveraging historical transaction data, the company can better understand sales distribution, customer demand, and category performance to optimize business strategies.

Goal

To analyze sales data by city and product category in order to uncover sales trends, identify top-performing products and regions, and support strategic decision-making that will help maximize revenue growth and improve operational efficiency.

Objective

- Develop an interactive dashboard that visualizes sales and order quantity across cities and product categories.
- Identify the top-performing cities and product categories contributing the most to overall sales.
- Provide insights into underperforming areas or categories that may require targeted strategies.
- Enable management to make data-driven decisions regarding product promotion, inventory allocation, and regional sales strategies.

SOAL 1 & 2

Database Structure

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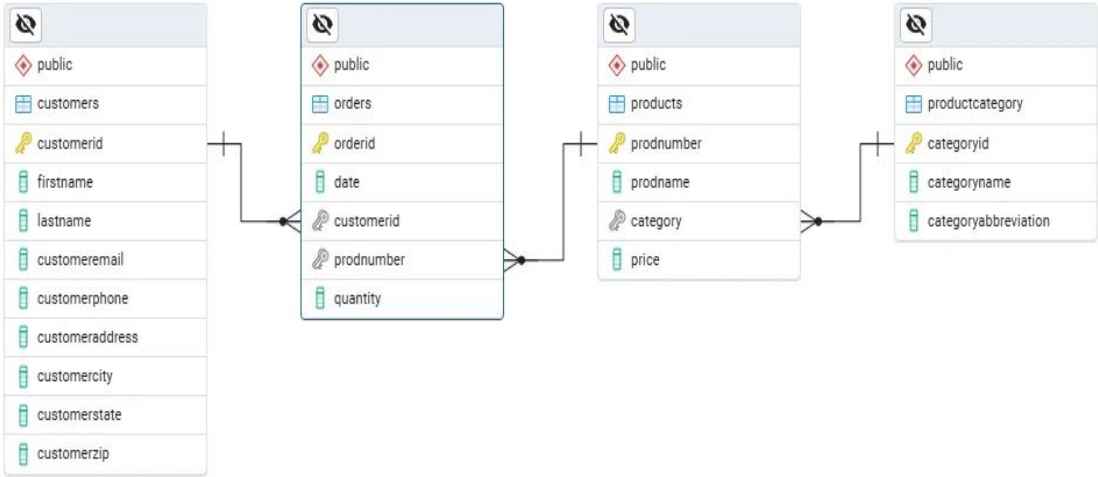
Entity Relationship Diagram



Primary Key Definition

1. **Customers** Table : `CustomerID`
2. **Products** Table : `ProdNumber`
3. **Orders** Table : `OrderID`
4. **ProductCategory** Table : `CategoryID`

Table Relationship

- `Customers.CustomerID = Orders.CustomerID`
- `Products.ProdNumber = Orders.ProdNumber`
- `ProductCategory.CategoryID = Products.Category`

SOAL 3

Data Retrieval

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SQL Query

```
SELECT
        ord.Date order_date, pc.CategoryName category_name, pd.ProdName
        product_name, pd.Price product_price, ord.Quantity order_qty, (ord.Quantity *
        pd.Price) total_sales, cs.CustomerEmail cust_email, cs. CustomerCity cust_city
FROM `pbi-bi-analyst-bank-muamalat.datasets.orders` ord
LEFT JOIN `pbi-bi-analyst-bank-muamalat.datasets.customers` cs
        ON ord.CustomerID = cs.CustomerID
LEFT JOIN `pbi-bi-analyst-bank-muamalat.datasets.products` pd
        ON pd.ProdNumber = ord.ProdNumber
LEFT JOIN `pbi-bi-analyst-bank-muamalat.datasets.product_category` pc
        ON pc.CategoryID = pd.Category
ORDER BY 1 ASC
```

Query Result

Query results

Save results | Open in

Job information | Results | Visualization | JSON | Execution details | Execution graph

Row	order_date	category_name	product_name	product_price	order_qty	total_sales
1	2020-01-01	Drone Kits	BYOD-220	69.0	1	
2	2020-01-01	eBooks	Polar Robots	23.99	2	
3	2020-01-01	eBooks	SCARA Robots	19.5	5	
4	2020-01-01	eBooks	Spherical Robots	16.75	5	
5	2020-01-01	Robots	RWW-75 Robot	883.0	3	2
6	2020-01-01	Training Videos	Drone Video Techniques	37.99	6	2
7	2020-01-02	Blueprints	Ladybug Robot Blueprint	12.0	2	
8	2020-01-02	Drone Kits	BYOD-100	54.0	5	
9	2020-01-02	Drones	DTE-QFN20 Drone	250.0	2	

Results per page: 50 | 1 – 50 of 3339

This SQL query retrieves detailed order information by combining data from multiple related tables: `orders`, `customers`, `products`, and `product_category`. It selects the order date, product category name, product name, price, order quantity, total sales (calculated as the price multiplied by quantity), customer email, and customer city. The data is pulled from the `orders` table, and additional details are fetched using `LEFT JOIN` with the `customers`, `products`, and `product_category` tables, based on matching keys like `CustomerID`, `ProdNumber`, and `CategoryID`.

The use of **LEFT JOIN** ensures that even if some data is missing from the related tables (such as customer or product details), the order data will still be included in the results. Finally, the results are sorted in ascending order based on the order date (`ord.Date`), with the earliest orders appearing first.

SOAL 4

Data Visualization

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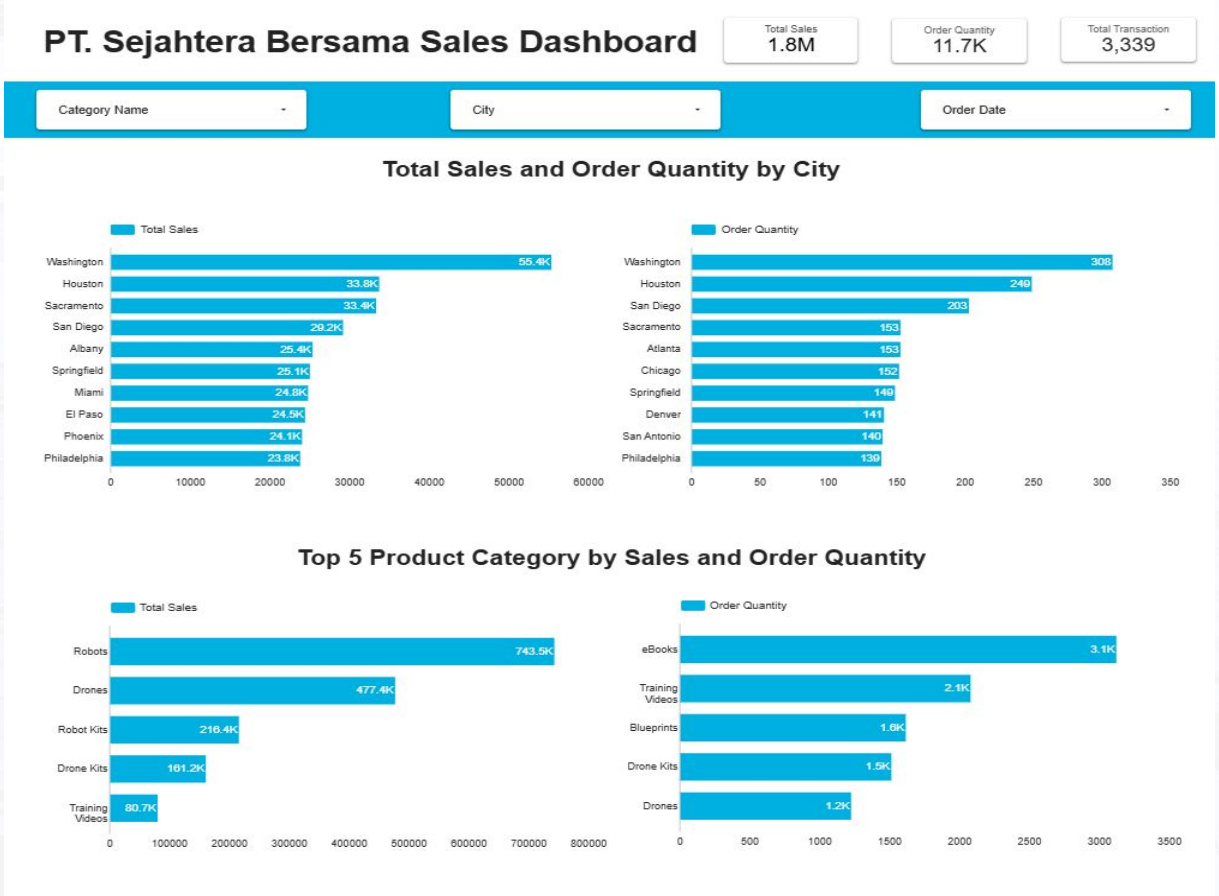

The dashboard shows that **Washington, Houston, and Sacramento** are the top-performing cities in terms of both sales and order volume. **Robots generate the highest revenue (743.5K)**, while **eBooks lead in order quantity (3.1K)**, highlighting a difference between high-value and high-volume product categories. These insights help the company focus on key markets and tailor strategies to balance revenue growth with order demand.

Link to Dashboard

SOAL 5

Recommendations

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Customer Segmentation & Retention

- Identify customers based on **purchase frequency** and **transaction value (RFM analysis)** → who are loyal customers, and who are at risk of churning.
- Send **personalized email promotions** (based on `cust_email`) to:
  - Loyal customers → offer special rewards/discounts (VIP program).
  - Passive customers → offer free shipping/discount vouchers to encourage them to return.

Category & Product Optimization

- From the `category_name` and `product_name` columns, analyze products with **highest & lowest sales**.
- Create **cross-sell & up-sell bundles**:
  - Example: buy *Drone Kits* → offer *Training Videos* or *Blueprints* at a discount.
  - Buy *Robots* → offer *eBooks* to support usage.

City-based Marketing

- From `cust_city`, check the **sales distribution per city**.
- Focus digital promotions on cities with low sales but high potential.
- Conduct **local events or community collaborations** (e.g., drone workshops in cities with many drone purchases).

Thank You

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