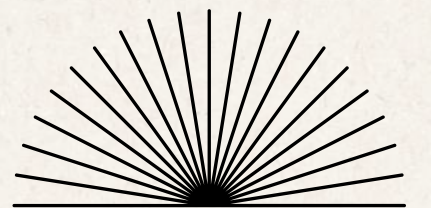


# FINAL TASK: DIGITAL USER CHURN DASHBOARD

**Bank Muamalat Business Intelligence Analyst  
Project Based Internship Program**

**PRESENTED BY:**

Suci Wulan Dari





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03	Personal Biodata
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10	Insights & Findings
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# SUCI WULAN DARI – Data Analyst Enthusiast



## About Me

Passionate data enthusiast skilled in SQL, Python, and data visualization. I love transforming data into insights to drive better decisions!

## Experience & Achievements

### Internship & Project Experience -

Project-Based Internship BI at Rakamin X Bank Muamalat

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Project-Based Internship Big Data Analytics at Rakamin X Kimia Farma

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Web Programmer Intern at Soca AI

### Relevant Achievements -

Bootcamp Data Analyst - DSAREA

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Belajar SQL - Dicoding

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SQL Practice - Myskill

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Belajar Data Science -Dicoding



# Case Study: Digital User Churn Analysis

**PT Sejahtera Bersama**, a company that sells digital products and hardware, is facing the challenge of retaining its users in an increasingly competitive market. A high churn rate is impacting their revenue and increasing customer acquisition costs.

## Analysis Objectives:

- Identify Churn Patterns
- Understand Key Churn Drivers
- Provide Actionable Insights for Retention Strategies
- Measure Impact of Retention Efforts





# Challenge Overview

**01** Identifying Primary Keys

**02** Defining Relationships

**03** Master Table Creation & SQL Query

**04** Data Visualization with Looker Studio

**05** Business Recommendations





# Dataset : Identifying Primary Keys



Customers	Type Data
<u>CustomerID</u> (PK)	Integer
FirstName	String
LastName	String
<u>CustomerEmail</u>	String
<u>CustomerPhone</u>	Integer
<u>CustomerAddress</u>	String
<u>CustomerCity</u>	String
<u>CustomerState</u>	String
<u>CustomerZip</u>	Integer

Orders	Type Data
<u>OrderID</u> (PK)	Integer
Date	Date
<u>CustomerID</u> (FK)	Integer
<u>ProdNum</u> (FK)	String
Quantity	Integer

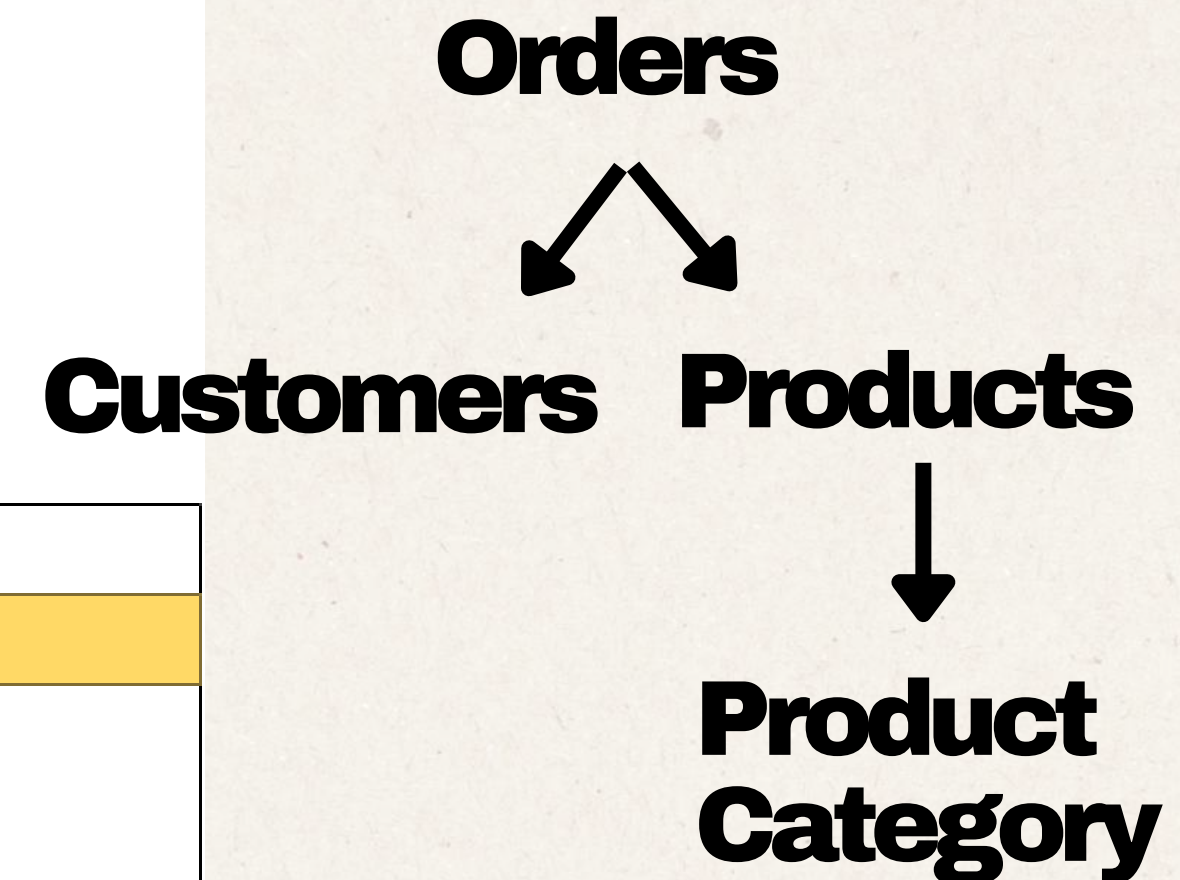
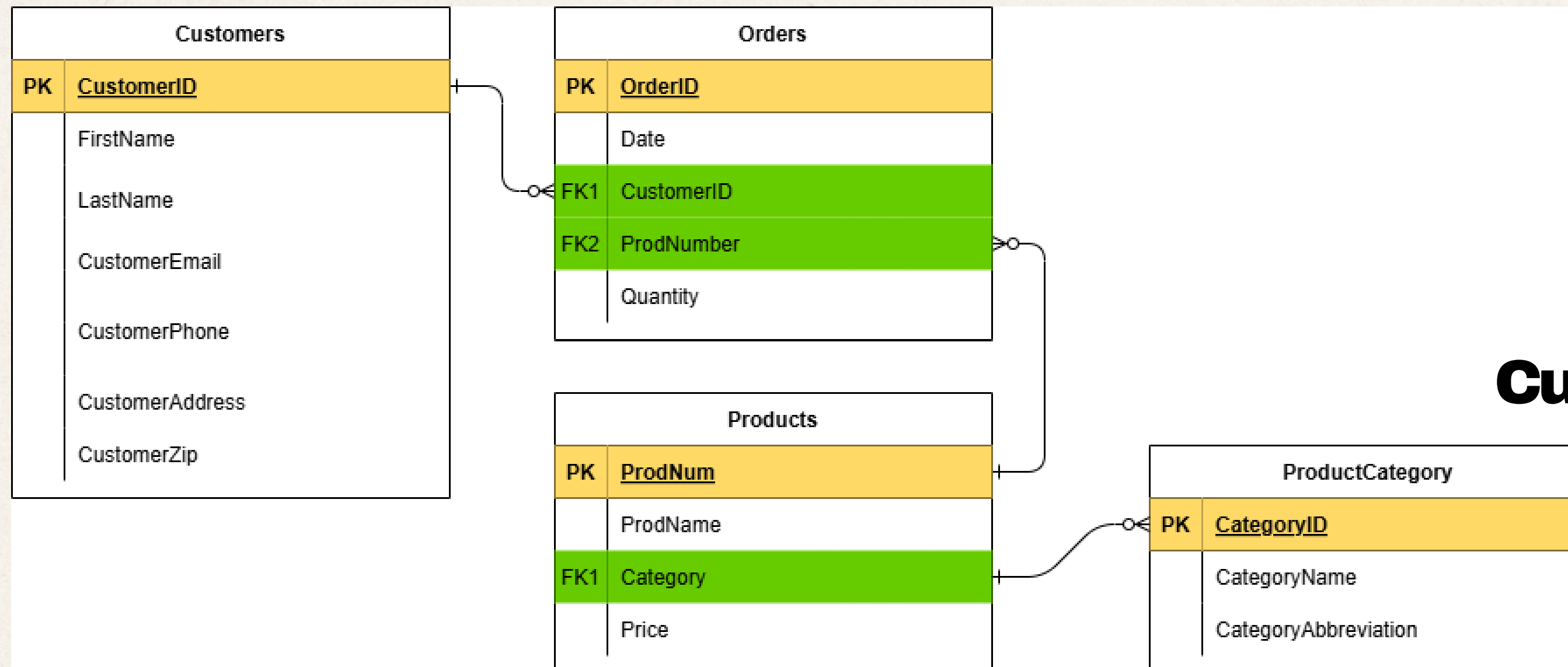
Products	Type Data
<u>ProdNum</u> (PK)	String
<u>ProdName</u>	String
<u>Category</u> (FK)	Integer
Price	Float

<u>ProductCategory</u>	Type Data
<u>CategoryID</u> (PK)	Integer
<u>CategoryName</u>	String
<u>CategoryAbbreviation</u>	String

**Note:**  
**PK : Primary Key**  
**FK : Foreign Key**



# Defining Relationships





Column	Data Source (Table)	Description
cust_email	customers	Customer Email
cust_city	customers	Customer Email
order_date	orders	Transaction date
order_qty	orders	Quantity of Products Purchased
product_name	products	Product Name
product_price	products	Product Price
category_name	product_categoty	Product Category Name
total_sales	products( qty * price)	Total Sales per Product

Master Table  
Creation



# Master Table SQL Query

SELECT

```
o.Date AS order_date,  
pc.CategoryName AS category_name,  
p.ProdName AS product_name,  
p.Price AS product_price,  
o.Quantity AS order_qty,  
(o.Quantity * p.Price) AS total_sales,  
c.CustomerEmail AS cust_email,  
c.CustomerCity AS cust_city,  
FROM `poetic-fact-451915-s7.bi_bankmuamalat.orders` o  
JOIN `poetic-fact-451915-s7.bi_bankmuamalat.customers` c ON o.CustomerID = c.CustomerID  
JOIN `poetic-fact-451915-s7.bi_bankmuamalat.products` p ON o.ProdNumber = p.ProdNumber  
JOIN `poetic-fact-451915-s7.bi_bankmuamalat.product_category` pc ON p.Category = pc.CategoryID  
ORDER BY o.Date ASC;
```



master\_table



QUERY

OPEN IN



SCHEMA

DETAILS

PREVIEW

TABLE



Filter

Enter property name or value

<input type="checkbox"/>	Field name	Type	Mode
<input type="checkbox"/>	order_date	DATE	NULLABLE
<input type="checkbox"/>	category_name	STRING	NULLABLE
<input type="checkbox"/>	product_name	STRING	NULLABLE
<input type="checkbox"/>	product_price	FLOAT	NULLABLE
<input type="checkbox"/>	order_qty	INTEGER	NULLABLE
<input type="checkbox"/>	total_sales	FLOAT	NULLABLE
<input type="checkbox"/>	cust_email	STRING	NULLABLE
<input type="checkbox"/>	cust_city	STRING	NULLABLE



# Result Data

## Master Table

Row	order_date	category_name	product_name	product_price	order_qty	total_sales	cust_email	cust_city
1	2020-02-01	Training Vid...	AI for Educ...	49.95	1	49.95	gma cenz y8g @co nsta	Springfi...
2	2020-04-03	Training Vid...	AI for Educ...	49.95	1	49.95	easkella...	New Orl...
3	2020-05-21	Training Vid...	AI for Educ...	49.95	1	49.95	rcouplan...	San Ant...
4	2020-05-23	Training Vid...	AI for Educ...	49.95	1	49.95	rsloc omb bh@ wun derg	Appleton



# **Business** **Questions**

- 01**    **How stable is sales performance over time? how to improve it?**
- 02**    **Which product categories contribute the most to revenue and transaction volume?**
- 03**    **Which cities have the highest total sales and purchases of products?**
- 04**    **How does customer segmentation impact revenue and retention?**



category\_name

cust\_city

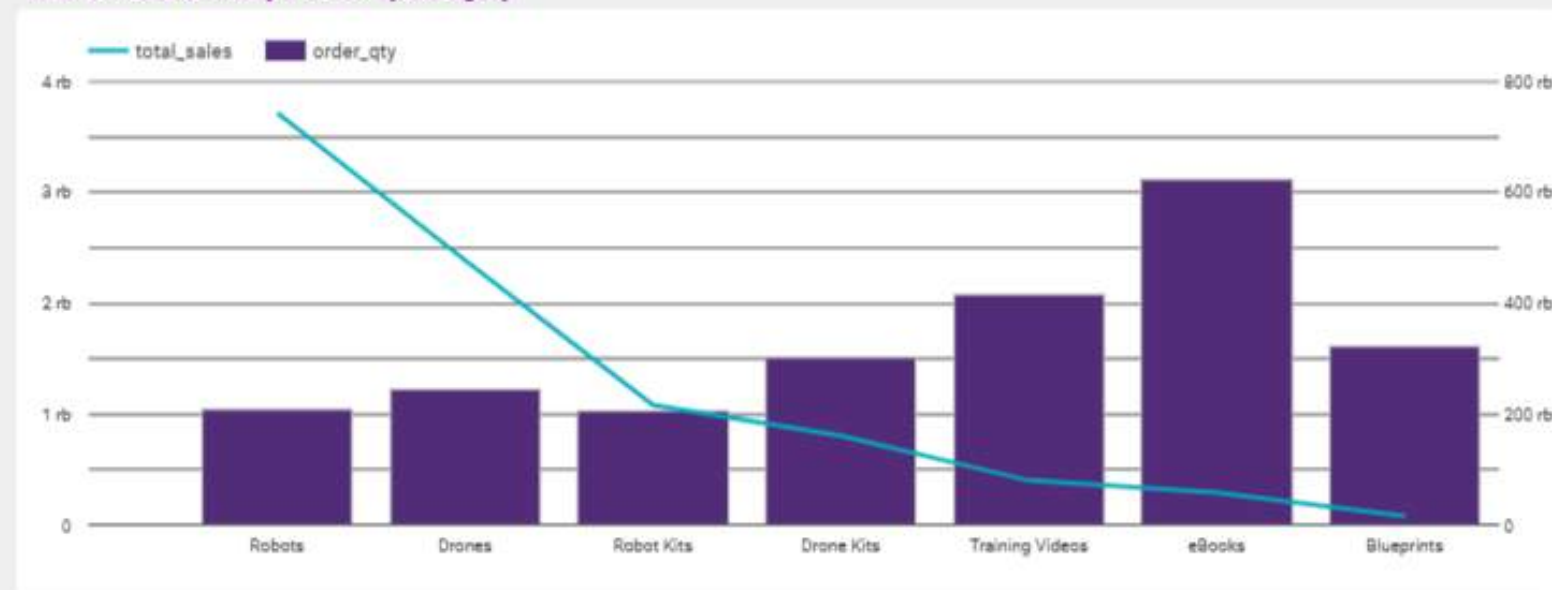
Pilih rentang tanggal

total\_sales  
\$1.754.750,57

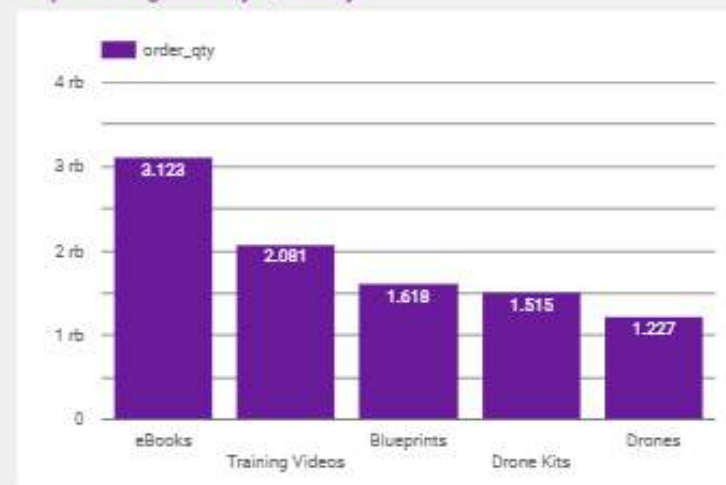
order\_qty  
11.654

Sales per Transaction  
\$2.410,37

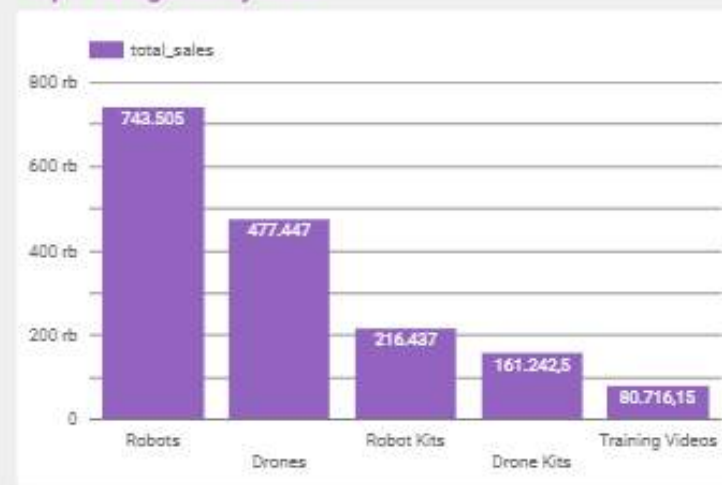
Total Sales & Quantity Produk by Category



Top 5 Categories by Quantity



Top 5 Categories by Sales



# Data Visualization in Looker Studio

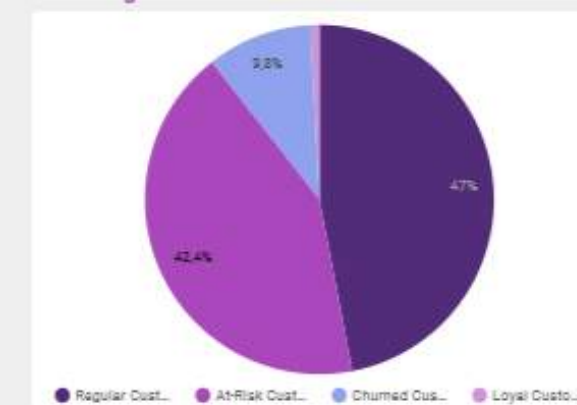
Total Sales by City



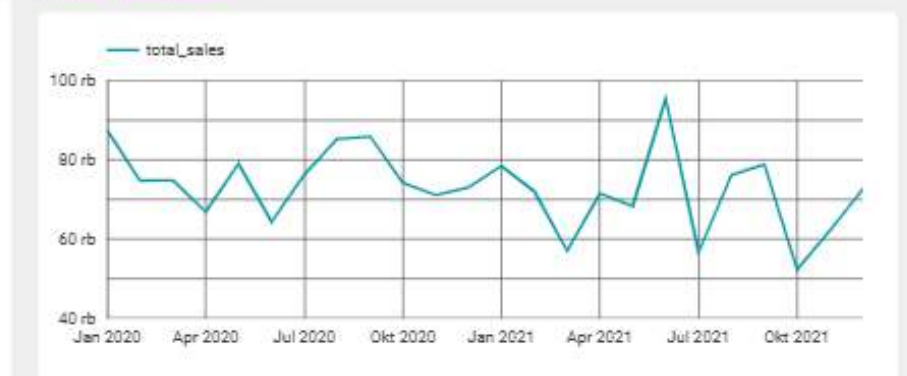
Total Quantity & Sales by City

Rank	cust_city	total_sales	order_qty
1.	Washington	55.381,94	308
2.	Houston	33.761,49	249
3.	Sacramento	33.280,2	153
4.	San Diego	29.228,59	203
5.	Albany	25.405,88	109
6.	Springfield	25.060,65	149
7.	Miami	24.833,45	138
8.	El Paso	24.457,14	137
9.	Phoenix	24.085,28	124
		1 - 10 / 361	< >

User Segmentation



Trend Total Sales





# Sales Performance

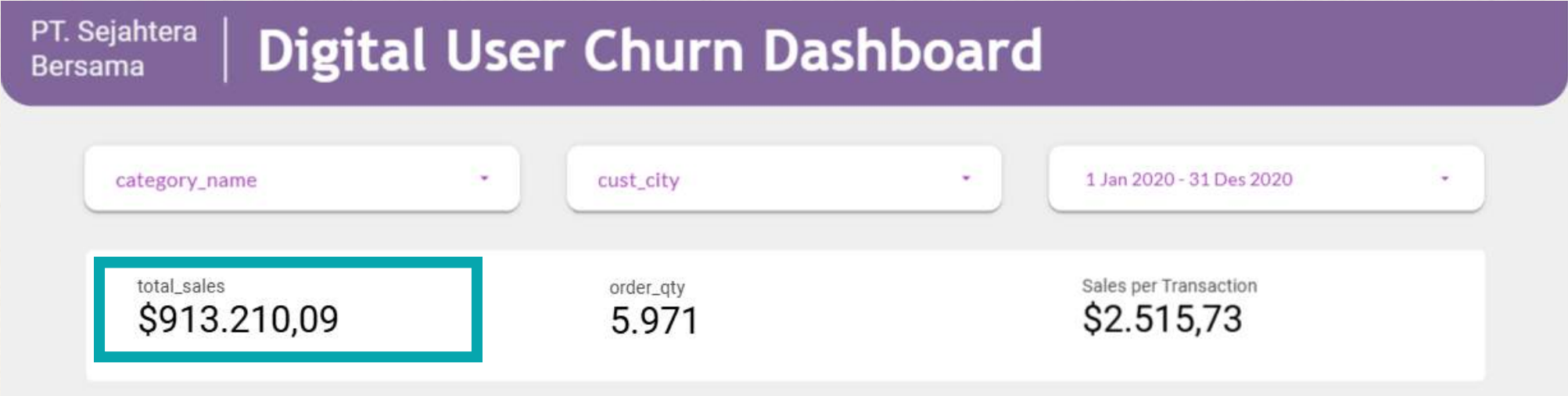


**-7.85%**  
**total sales**

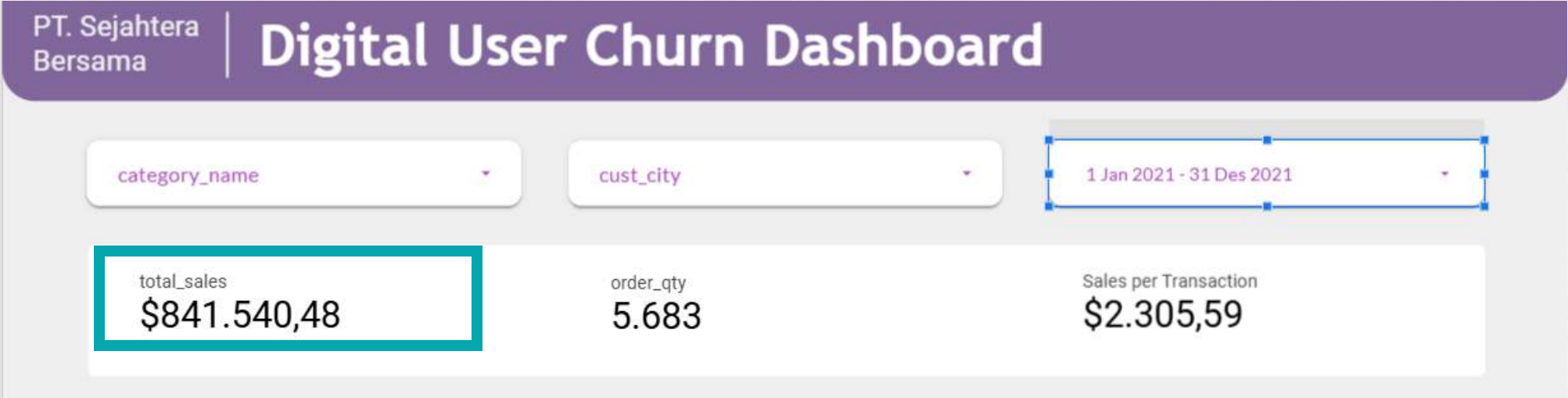
**-4.83%**  
**order qty**

**-8.35%**  
**sales per transaction**

2020



2021

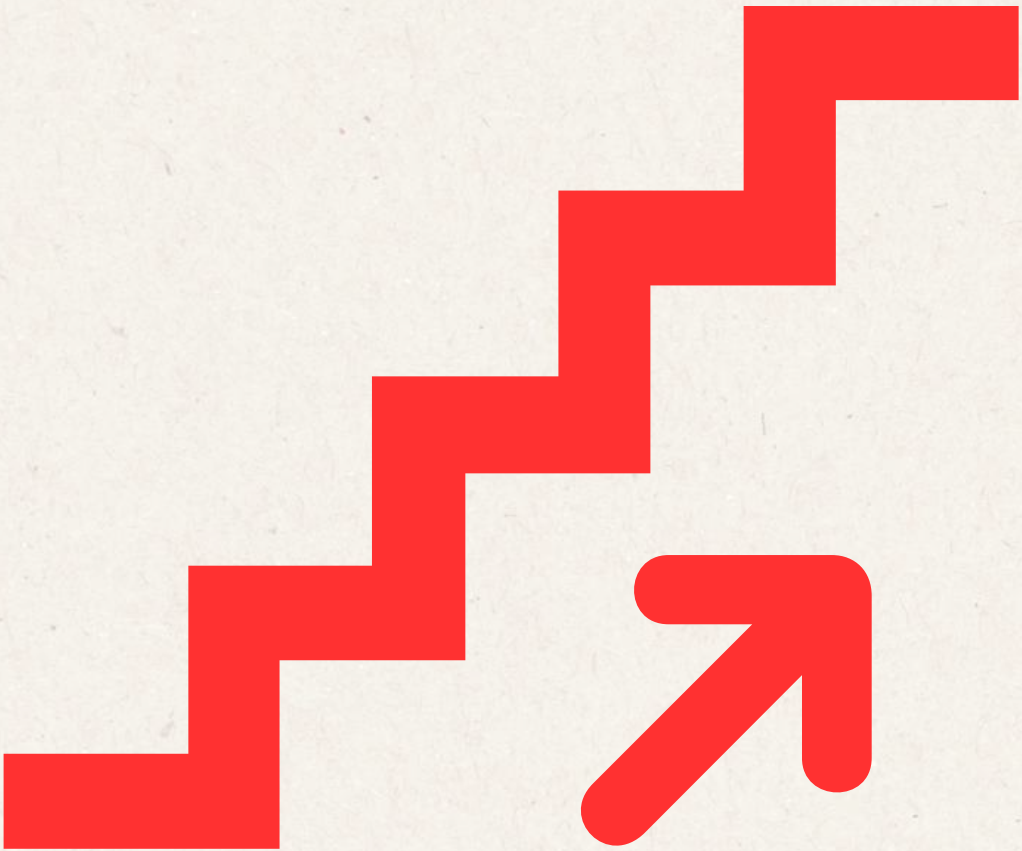
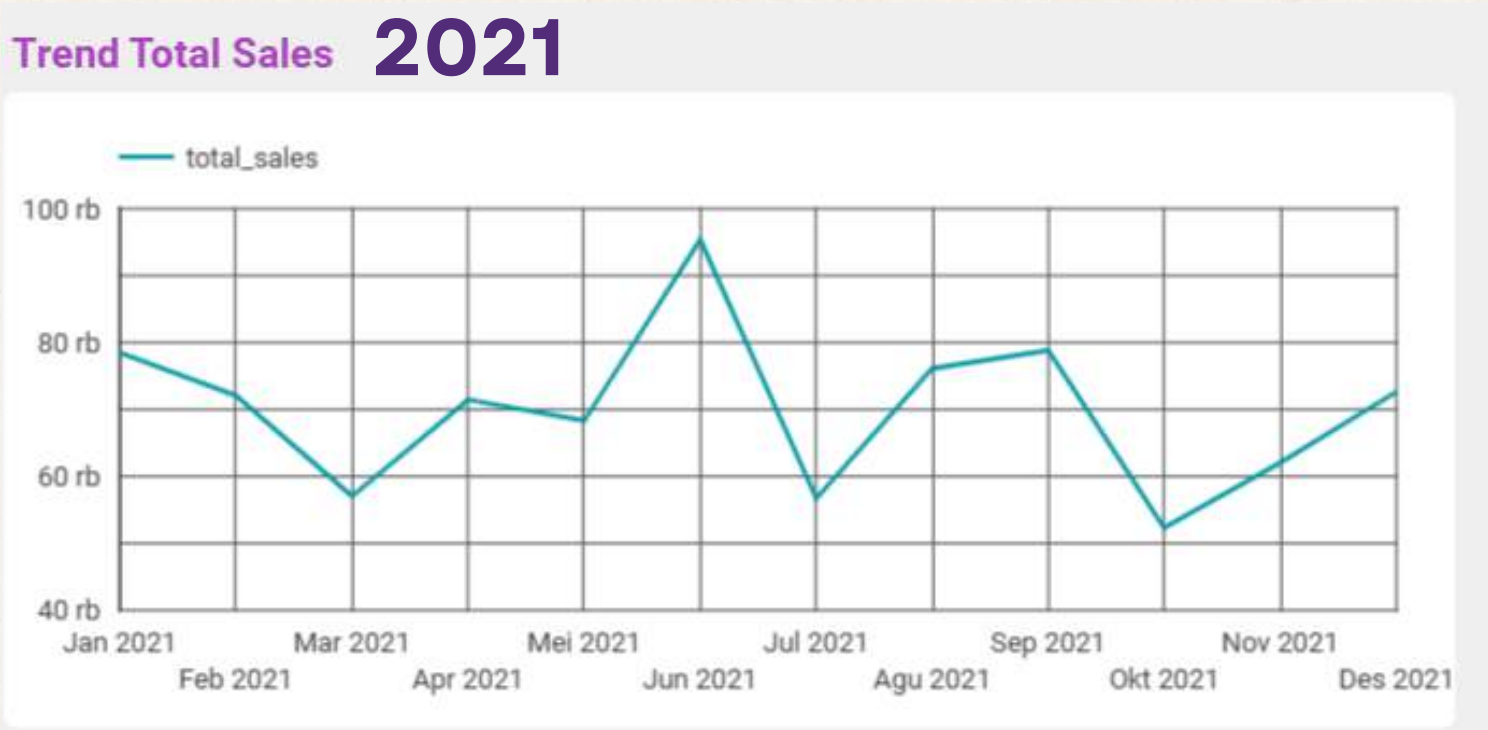
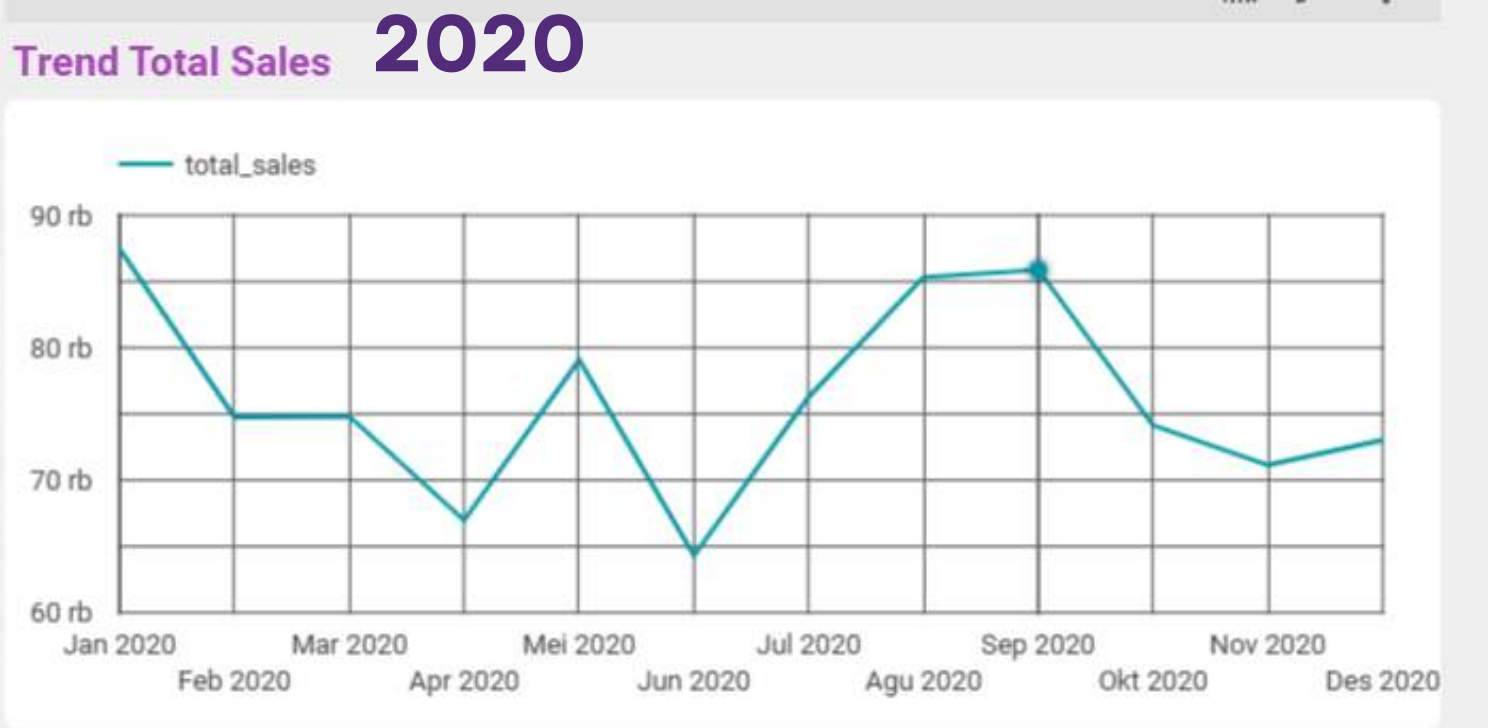




# Sales Performance

01 The highest sales are at the beginning of the year, namely **January**, and also in the middle, namely **June, August, September**

02 Low Sales Months: **March, April, October**

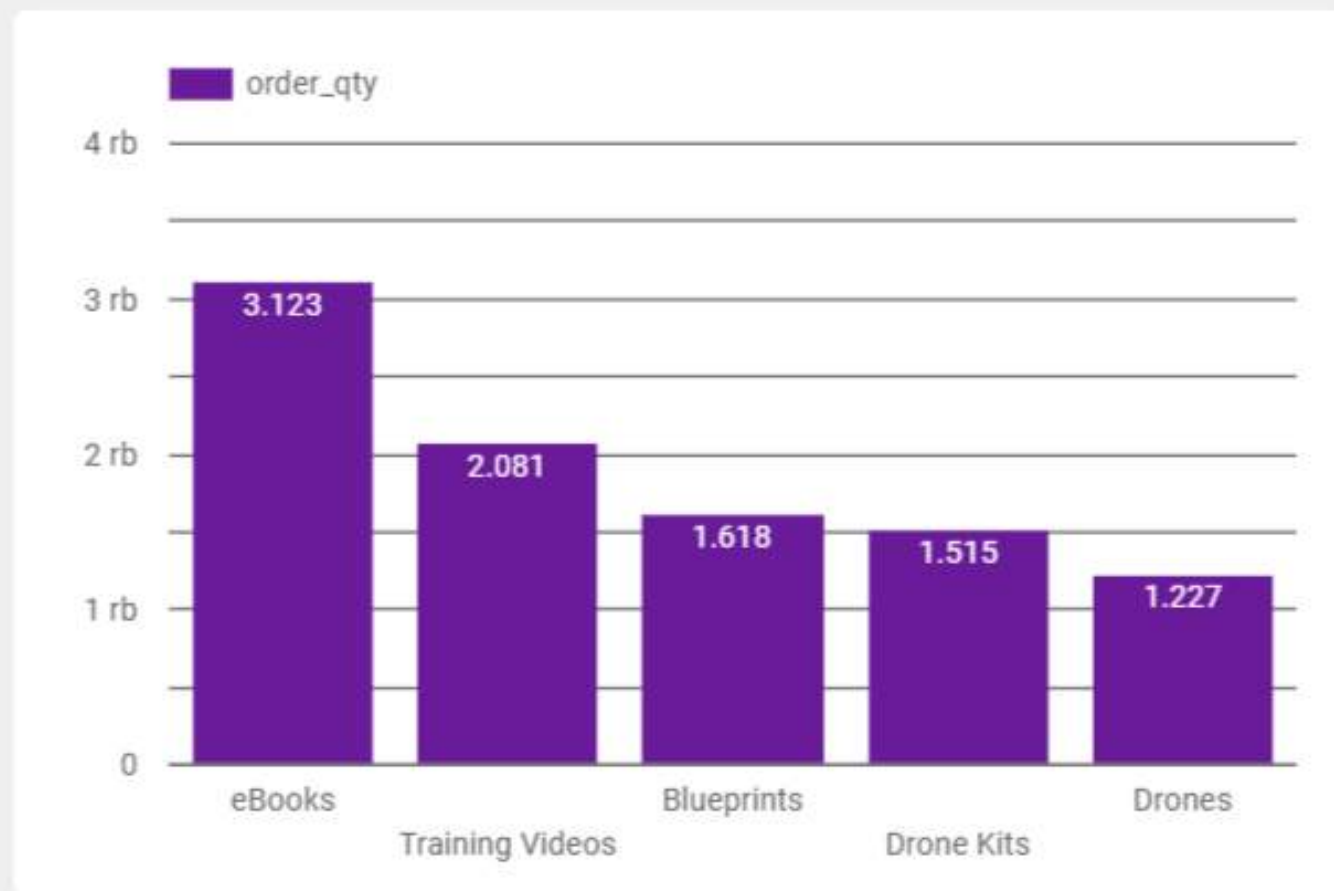




# Best-Selling Products & Top Revenue Drivers

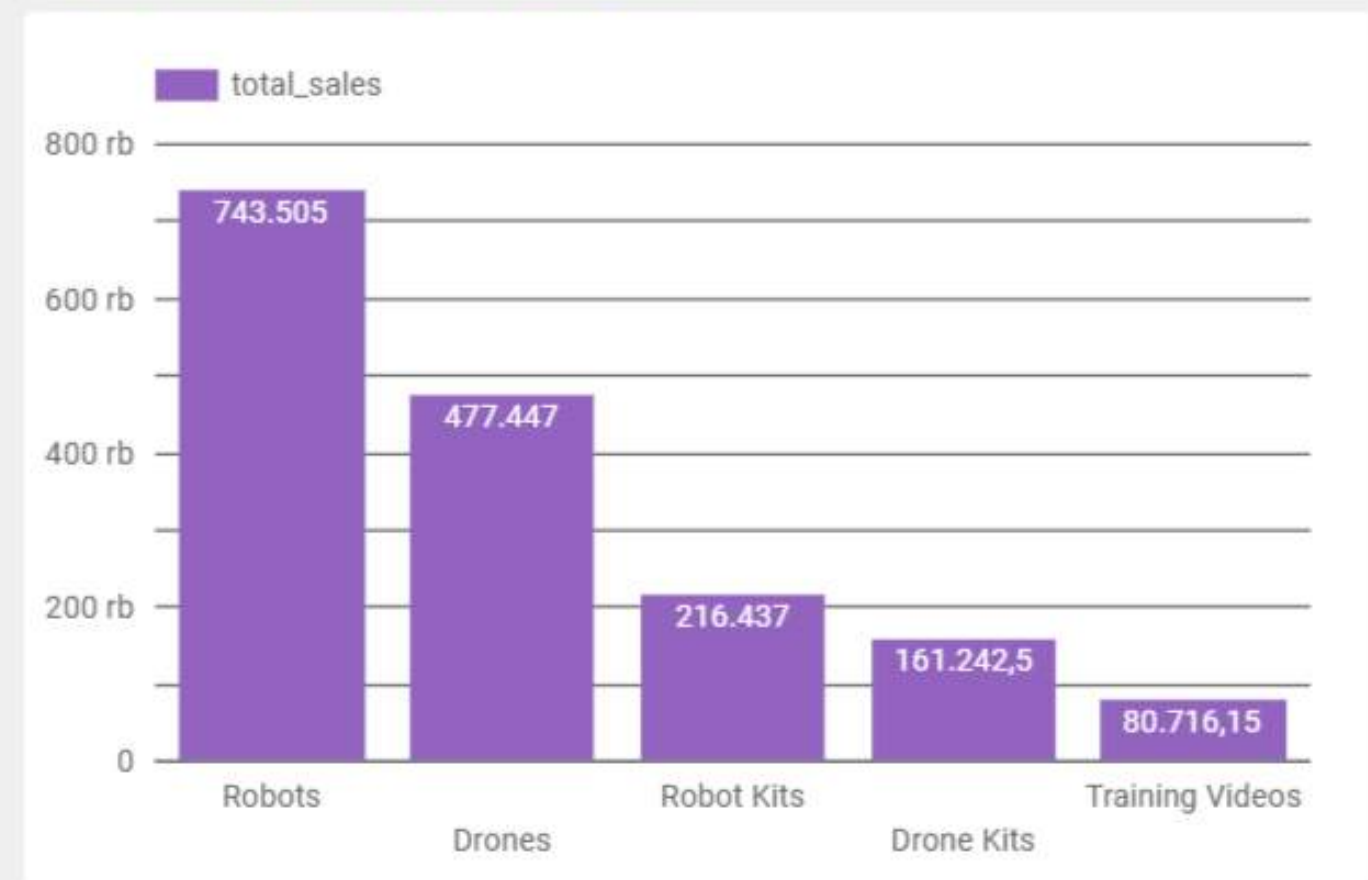
**01** The most purchased products are **ebooks & training**, indicating high customer interest in educational materials **before buying hardware** like drones or robot kits.

Top 5 Categories by Quantity



**02** The products with the highest total sales are dominated by **hardware (robots, drones and drone kits)**, which have higher prices.

Top 5 Categories by Total Sales





# Top Cities Driving Sales & Products

Total Quantity & Sales by City

	cust_city	total_sales	order_qty ▾
1.	Washington	55.381,94	308
2.	Houston	33.761,49	249
3.	San Diego	29.228,59	203
4.	Atlanta	18.984,66	153
5.	Sacramento	33.380,2	153

**01** **Washington** was the **largest contributor to total sales** and also had the **highest number of purchases**, indicating strong customer loyalty.

Total Quantity & Sales by City

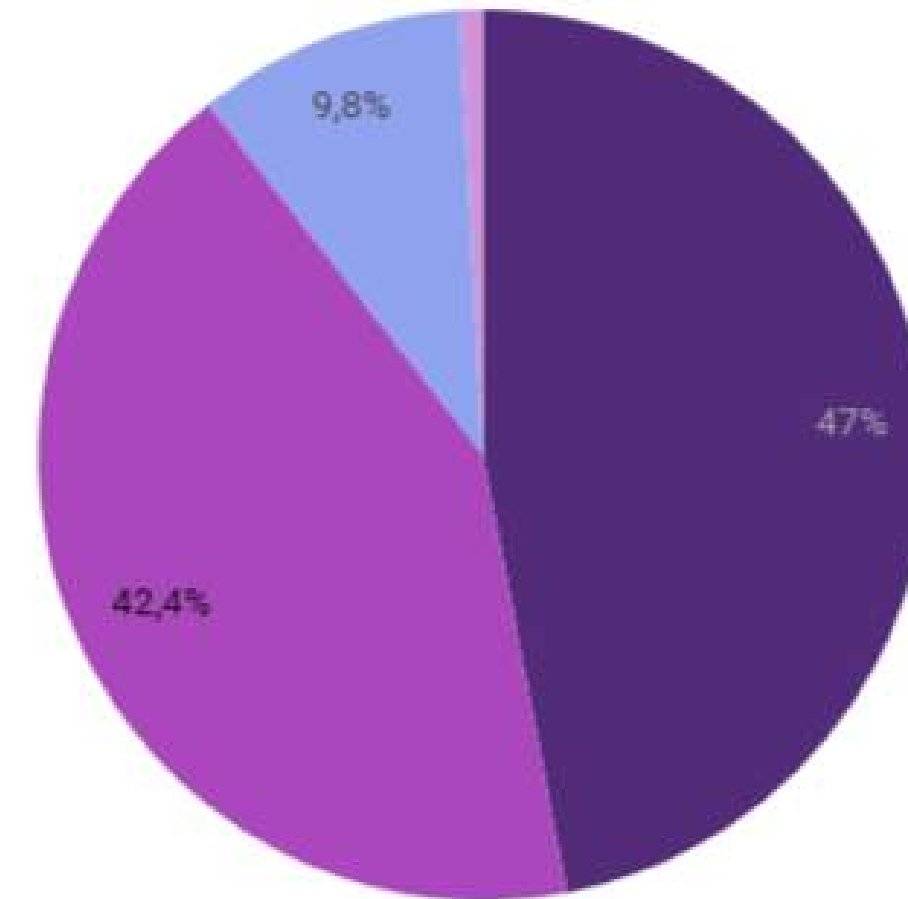
	cust_city	total_sales ▾	order_qty
1.	Washington	55.381,94	308
2.	Houston	33.761,49	249
3.	Sacramento	33.380,2	153
4.	San Diego	29.228,59	203
5.	Albany	25.405,88	109

**02** **Atlanta** is a city with high orders but relatively low sales



# Customer Segmentation

- 01** Regular customers dominate (47%), indicating a stable customer base.
- 02** 42.4% are at risk, requiring targeted re-engagement strategies.
- 03** Loyal customers (14%) contribute significantly, emphasizing the importance of retention efforts.
- 04** Churn rate is 9.8%, suggesting room for customer retention improvements.



- Loyal Customers: 14% (High engagement, frequent purchases)
- Regular Customers: 47% (Consistent but moderate activity)
- At-Risk Customers: 42.4% (Declining purchase frequency)
- Churn Customers: 9.8% (No purchases for over a year)



# Recommendations

## 1. Leverage Seasonal Trends

- Maximize high-performing months (January, August, September) with aggressive promotions and exclusive product bundles.
- Implement targeted discounts in low-performing months (April, June, March, July) to boost demand.

## 2. Boost Sales Through Smart Product Strategies

- Introduce bundle offers (ebooks + drones/kits) to increase order value.
- Use cross-selling & upselling techniques to convert educational buyers into hardware customers.

## 3. Optimize City-Specific Marketing

- Customize promotions for high-sales cities (Washington, Houston) to sustain growth.
- Offer localized deals & incentives in high-transaction but low-spending cities (Atlanta) to increase purchase value.

## 4. Enhance Customer Engagement & Retention

- Implement a loyalty program to reward repeat buyers and sustain the 14% loyal customer base.
- Deploy win-back campaigns targeting at-risk and churned customers with exclusive offers.
- Use personalized promotions based on past behavior to re-engage at-risk customers (42.4%).



Increased total sales through optimized seasonal promotions and product bundling.

Higher customer retention by reducing churn and engaging at-risk customers.

Maximized revenue per transaction via cross-selling and targeted pricing strategies.

Improved regional market penetration with localized marketing and strategic partnerships.





# Thank you

**Github**

<https://github.com/suciwuland/>

**Looker Studio**

[Click here](#)

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[suci wulan dari](#)