

Sales Report

PT Sejahtera Bersama

Bank Muamalat
Business Intelligence Analyst

Presented by SUYANTO



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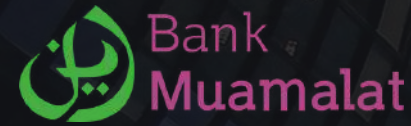
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About Me

Data Analytics & Engineering Professional with 4+ years in FMCG sales, specializing in data visualization, SQL, Python, and data engineering. Achieved "Distinction" in Tetris Data Analyst Fast Track and MySkill Data Bootcamp.

Completed internships at Bio Farma Group, developing Power BI dashboards and using Google BigQuery, and graduated from Digital Skola Fast Track Data Engineer and AWS re/Start programs. Certified as an AWS Cloud Practitioner with hands-on cloud experience.

Skilled in delivering actionable insights through data-driven solutions.



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PT Bank Muamalat Indonesia Tbk (BMI), established on November 1, 1991, is Indonesia's first Islamic bank, founded by the Indonesian Ulema Council (MUI), the Indonesian Association of Muslim Intellectuals (ICMI), and Muslim entrepreneurs with government support. Officially operating on May 1, 1992, BMI provides Sharia-based banking services and has been a pioneer in Islamic financial innovations in Indonesia, offering products such as Sukuk Subordinasi Mudharabah, Takaful insurance, Shar-e instant savings, and the Shar-e Gold Debit Visa—Indonesia's first Sharia debit card with chip technology. BMI operates 239 service offices, including one in Kuala Lumpur, Malaysia, supported by a vast network of ATMs and mobile banking services.

With a vision to be a modern, professional, and Islamic bank, BMI collaborates with affiliates like Al-Ijarah Indonesia Finance (ALIF) for Sharia financing, DPLK Muamalat for pension funds, Muamalat Institute for Sharia economic education, and Baitulmaal Muamalat for Zakat, Infak, and Sedekah (ZIS) distribution. Recognized nationally and internationally, BMI continues to expand its operations while maintaining its leadership in the Islamic banking industry.

website : bankmuamalat.co.id

About Project

Background:

Evaluation of sales performance from 2020 to 2021 utilizing data-driven insights.

Dataset:

- Customers.csv -- Detailed customer information
- Orders.csv -- Transaction records
- ProductCategory.csv -- Product categorization
- Products.csv -- Detailed product information

Problem:

- Creating a sales dashboard for 2020-2021 using data visualization tools.
- Providing recommendations to maintain or improve sales performance.

Tools



Google
Big Query



+ a b | e a u

Google Big Query

A fully-managed, serverless data warehouse designed for fast and scalable analysis of large datasets using SQL.

Tableau

A powerful data visualization platform that transforms raw data into interactive and shareable dashboards for insightful decision-making.

Data Preparation

Task :

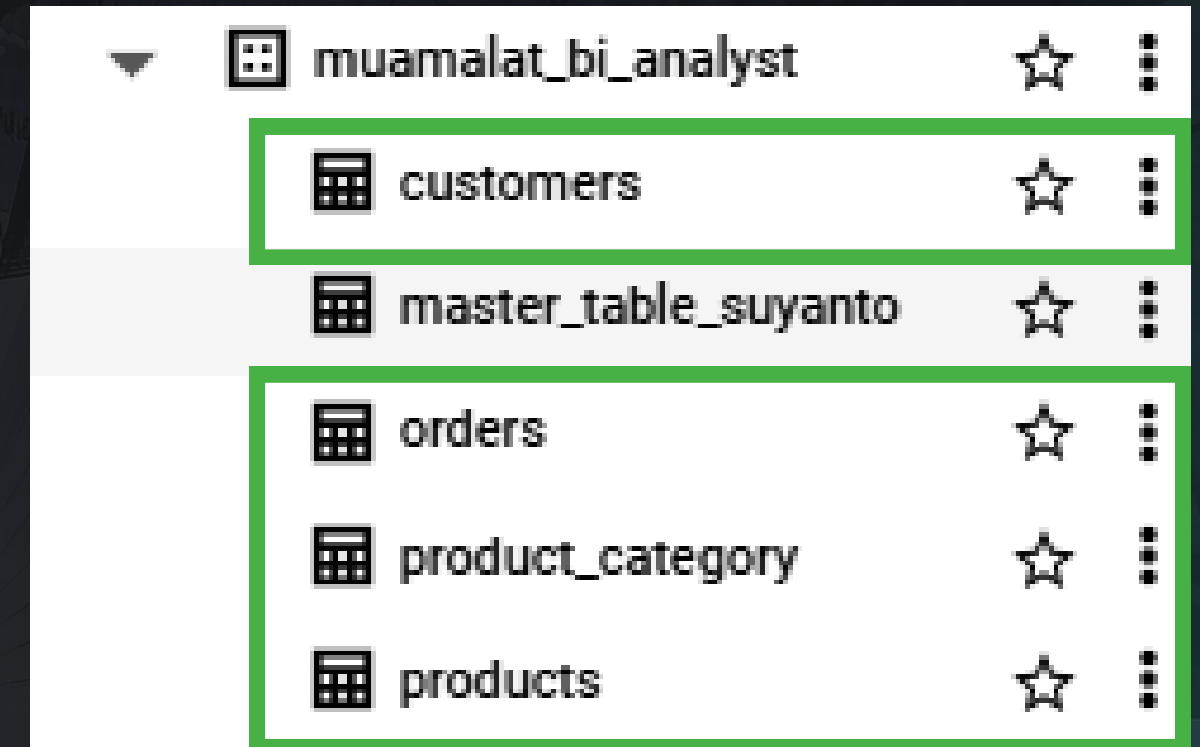
Uploading dataset into Google Big Query.



















Data Preparation

Check the data for :

- Missing values
- Duplicates
- Inconsistent formats

The data is already in good shape with no issues detected.



▼	 muamalat_bi_analyst		
	 customers		
	 master_table_suyanto		
	 orders		
	 product_category		
	 products		

Data Preparation

CustomerID	INTEGER
FirstName	STRING
LastName	STRING
CustomerEmail	STRING
CustomerPhone	STRING
CustomerAddress	STRING
CustomerCity	STRING
CustomerState	STRING
CustomerZip	INTEGER

Row	CustomerID	FirstName	LastName	CustomerEmail	CustomerPhone
1	1590	Christophe	Meletti	cmelettifh@tripadvisor.com#mailto:cmelettifh@tripadvisor.com#	319-439-8722
2	251	Aryne	Ranklin	aranklin5e@xing.com#mailto:a...	563-740-6575
3	628	Carlie	Pala	cpala1d@mysql.com#mailto:c...	563-279-3211
4	2042	Kaycee	Marshfield	kmarshfieldcs@jiathis.com#m...	563-329-5171
5	1925	Ferguson	Rabb	frabb3h@t.co#mailto:frabb3h...	319-175-0676

CustomerAddress	CustomerCity	CustomerState	CustomerZip
50348 Milwaukee Plaza	Waterloo	Iowa	50706
114 Grover Avenue	Davenport	Iowa	52804
765 Del Sol Way	Davenport	Iowa	52804
6048 Crescent Oaks Avenue	Davenport	Iowa	52804
52320 Ronald Regan Center	Iowa City	Iowa	52245

Customers
(9 Columns and 2,123 Rows)

OrderID	INTEGER
Date	DATE
CustomerID	INTEGER
ProdNumber	STRING
Quantity	INTEGER

Row	OrderID	Date	CustomerID	ProdNumber	Quantity
1	1758	2021-01-15	923	BP101	1
2	404	2020-03-26	1256	BP101	2
3	575	2020-05-06	635	BP101	2
4	1098	2020-08-25	1480	BP101	2
5	1320	2020-10-10	534	BP101	2

Orders
(5 Columns and 3,339 Rows)

Data Preparation

ProductCategory (3 Columns and 7 Rows)

CategoryID	INTEGER
CategoryName	STRING
CategoryAbbreviation	STRING

Row	CategoryID	CategoryName	CategoryAbbreviation
1	1	Blueprints	BP
2	2	Drone Kits	DK
3	3	Drones	DS
4	4	eBooks	EB
5	5	Robot Kits	RK
6	6	Robots	RS
7	7	Training Videos	TV

Products (4 Columns and 70 Rows)

ProdNumber	STRING
ProdName	STRING
Category	INTEGER
Price	FLOAT

Row	ProdNumber	ProdName	Category	Price
1	BP101	All Eyes Drone Blueprint	1	9.99
2	BP102	Bsquare Robot Blueprint	1	8.99
3	BP104	Cat Robot Blueprint	1	4.99
4	BP105	Creature Robot Arms Blueprint	1	12.0
5	BP106	Hexacopter Drone Blueprint	1	8.99

Project Challenge 1

Soal 1

A. Tugas

Tentukan masing-masing primary key pada 4 dataset penjualan

1. Primary key tabel Customer : **CustomerID**
2. Primary key tabel Products : **ProdNumber**
3. Primary key tabel Orders : **OrderID**
4. Primary key tabel ProductCategory : **CategoryID**

ProdNumber	STRING
ProdName	STRING
Category	INTEGER
Price	FLOAT

OrderID	INTEGER
Date	DATE
CustomerID	INTEGER
ProdNumber	STRING
Quantity	INTEGER

CategoryID	INTEGER
CategoryName	STRING
CategoryAbbreviation	STRING

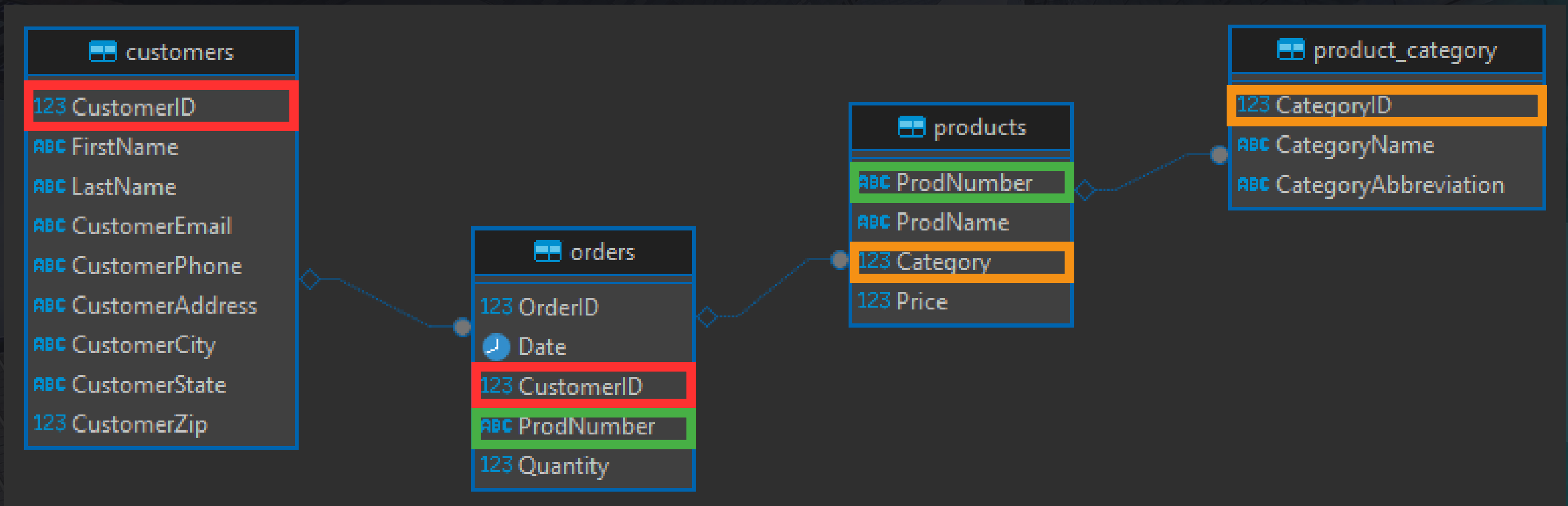
CustomerID	INTEGER
FirstName	STRING
LastName	STRING
CustomerEmail	STRING
CustomerPhone	STRING
CustomerAddress	STRING
CustomerCity	STRING
CustomerState	STRING
CustomerZip	INTEGER

Project Challenge 2

Soal 2

A. Tugas

Tentukan relationship dari ke-4 table tersebut



Project Challenge 3

Soal 3

A. Tugas

Sebagai BI Analyst PT Sejahtera Bersama, kita akan membuat sebuah table master yang berisikan informasi :

- CustomerEmail (cust_email)
- CustomerCity (cust_city)
- OrderDate (order_date)
- OrderQty (order_qty)
- ProductName (product_name)
- ProductPrice (product_price)
- ProductCategoryName (category_name)
- TotalSales (total_sales)

order_date	DATE
category_name	STRING
product_name	STRING
product_price	FLOAT
order_qty	INTEGER
total_sales	FLOAT
cust_email	STRING
cust_city	STRING
cust_state	STRING

The master table consists of **9 columns** and **3,339 rows**, with an additional column for "state" for map visualization purposes.

Row	order_date	category_name	product_name	product_price	order_qty	total_sales	cust_email	cust_city	cust_state
1	2020-01-01	Drone Kits	BYOD-220	69.0	1	69.0	edew@nba.com	Honolulu	Hawaii
2	2020-01-01	eBooks	Polar Robots	23.99	2	47.98	fvaslerqt@comsenz.com	Jackson	Mississippi
3	2020-01-01	eBooks	SCARA Robots	19.5	5	97.5	llespercx@com.com	Des Moines	Iowa
4	2020-01-01	eBooks	Spherical Robots	16.75	5	83.75	lfromonte9@de.vu	Birmingham	Alabama
5	2020-01-01	Robots	RWW-75 Robot	883.0	3	2649.0	tmckernot@tinyurl.com	Katy	Texas

Project Challenge 3

```
1 SELECT
2     ord.`Date` AS order_date,
3     ca.CategoryName AS category_name,
4     prod.ProdName AS product_name,
5     prod.Price AS product_price,
6     ord.Quantity AS order_qty,
7     ROUND((prod.Price * ord.Quantity),2) as total_sales,
8     SPLIT(cus.CustomerEmail, '#')[OFFSET(0)] AS cust_email,
9     cus.CustomerCity AS cust_city,
10    cus.CustomerState AS cust_state
11 FROM
12     `muamalat-bi-analyst1.muamalat_bi_analyst.orders` AS ord
13 JOIN
14     `muamalat-bi-analyst1.muamalat_bi_analyst.customers` AS cus
15     ON ord.CustomerID = cus.CustomerID
16 JOIN
17     `muamalat-bi-analyst1.muamalat_bi_analyst.products` AS prod
18     ON prod.ProdNumber = ord.ProdNumber
19 JOIN
20     `muamalat-bi-analyst1.muamalat_bi_analyst.product_category` AS ca
21     ON ca.CategoryID = prod.Category
22 ORDER BY
23     order_date;
24
```

A straightforward query combining 4 tables into a single master table using JOIN.

The ROUND syntax was added to round numbers, as continuous values were identified in BigQuery.

The SPLIT and OFFSET functions were included to extract valid email addresses from the existing data.

Project Challenge 4 & 5

Soal 4

A. Tugas

Dari hasil tabel yang dibuat pada soal nomor 3, simpanlah hasilnya dalam bentuk CSV. Dengan menggunakan Looker Studio, buatlah visualisasi yang menampilkan data penjualan tersebut. Visualisasi tersebut harus berisi minimal :

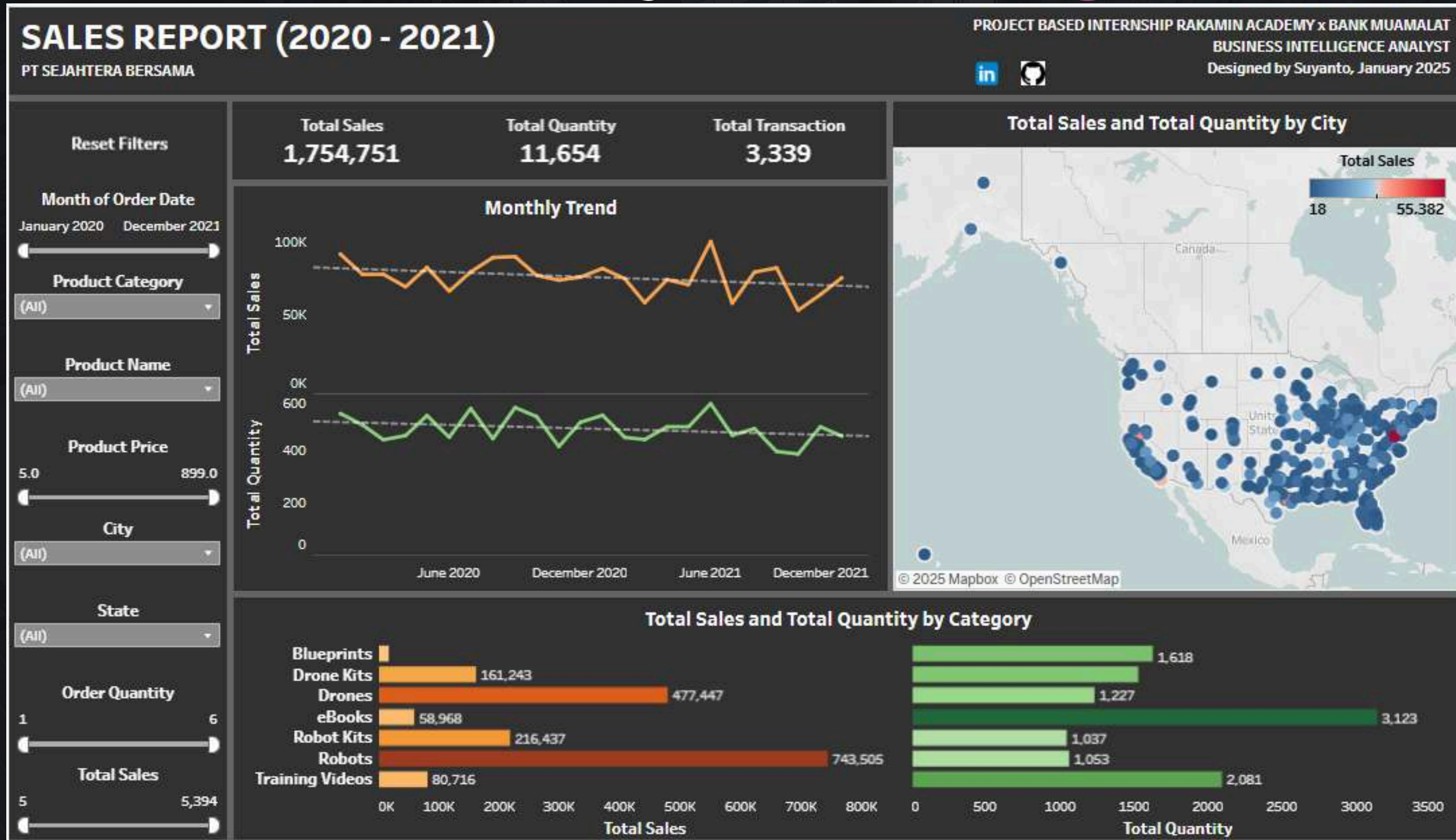
- Total keseluruhan sales
- Total keseluruhan sales berdasarkan kategori produk
- Total keseluruhan qty berdasarkan kategori produk
- Total sales berdasarkan kota
- Total qty berdasarkan kota
- Top 5 kategori produk yang paling tinggi salesnya
- Top 5 kategori produk yang paling tinggi qtynya

Soal 5

A. Tugas

Sebagai BI analyst PT Sejahtera Bersama, apa yang bisa anda usulkan untuk mempertahankan penjualan ataupun menaikkan penjualan dengan tabel transaksi detail yang sudah ada?

Project Challenge 4



Project Challenge 5

From the sales trend, there is a visible downtrend in sales and quantity. Here are some **recommendations** that can be implemented:

1. Focus on High-Sales Categories

Robots and **Drones** are the top revenue contributors, so prioritize these categories:

- Introduce Bundle Offers: Pair high-margin products like Robots with accessories or maintenance packages.
- Enhance Product Features: Add new capabilities (e.g., AI-powered robots or advanced drones) to appeal to existing and new customers.
- Target Premium Customers: Market high-ticket items to industries like manufacturing, agriculture, or research sectors.

Project Challenge 5

2. Boost High-Quantity Categories

eBooks and **Training Videos** are sold in large volumes but contribute less to revenue.

- Upsell with Product Purchase: Offer eBooks and training videos at a discount with the purchase of high-priced items like Robots or Drones.
- Subscription Models: Provide ongoing training content or access to eBooks through a subscription to generate consistent revenue.

3. Re-Evaluate Low-Performing Categories

Blueprints show low sales and low quantities.

- Rethink Product Offering: Identify if these products align with customer needs or if they should be phased out or replaced.
- Improve Marketing: Showcase practical use cases for these products through social media, demo videos, or influencer collaborations.

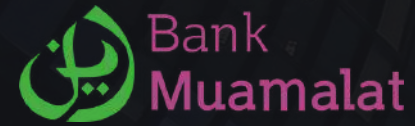
Project Challenge 5

4. Drive Demand Through Marketing

- Seasonal Promotions: Launch campaigns during key buying seasons, like holidays or industry conferences.
- Customer Education: Highlight product value and use cases through workshops, webinars, or targeted advertising.
- Loyalty Programs: Reward repeat customers with discounts or exclusive access to new products.

5. Address Downtrend in Sales and Quantity

- Analyze Customer Feedback: Identify why customers are purchasing less—price, quality, competition, or other factors.
- Expand Reach: Tap into new markets or demographics that could benefit from these products.
- Dynamic Pricing: Adjust pricing strategies based on demand, offering discounts on slow-moving products to boost quantities.



Links

Presentation Video (Youtube) :

<https://youtu.be/kX5yyl8bLpI>

Tableau Dashboard :

<https://public.tableau.com/app/profile/suyanto.zhang/viz/PBIRakaminxBankMuamalat/SalesReport>

GitHub Repository :

<https://github.com/Yuandro/PBI-Bank-Muamalat-January-2025>

Thank You

