

# Sales Performance Analytics Dashboard using Google BigQuery & Looker Studio

(VIRTUAL INTERNSHIP EXPERIENCE – RAKAMIN X BANK MUAMALAT)

Presented by  
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Bachri

## MY EXPERIENCE



## Visca Chaerunnisa Bachri

### ABOUT ME

Hi! I'm Visca, a passionate Informatics Engineering student from Politeknik Negeri Jakarta who loves turning data into stories. Through my experience as a BI Analyst Intern in the Rakamin x Bank Muamalat Virtual Internship Program, I developed skills in analyzing sales data, building dashboards, and uncovering insights that drive better decisions. For me, data isn't just about analytics—it's about finding patterns, solving problems, and creating impact.

#### AI Engineer Intern – Pusat Penelitian dan Pengabdian Masyarakat (P3M) PNJ

- Contributed to AI-based research projects in image processing and computer vision.
- Assisted in developing machine learning models for real data experiments.
- Tools: Python, TensorFlow, YOLO, Google Colab

#### Virtual Business Intelligence Analyst Intern – Rakamin x Bank Muamalat

- Participated in a virtual internship program focusing on data analysis and visualization.
- Processed and analyzed sales data using Google BigQuery and Looker Studio.
- Tools: BigQuery, Looker Studio, Google Sheets

#### Data Analytics Projects – Revou, DQLab, and KarirNex Bootcamps

- Completed multiple bootcamp projects involving data cleaning, exploration, and visualization.
- Generated actionable insights from business datasets using Python and BI tools.
- Tools: Python (Pandas, Matplotlib), Excel, Google Data Studi, Tableau, PowerBI



Bank Muamalat Indonesia is the first and only pure Islamic bank in Indonesia, established in 1991 and operating entirely based on Sharia principles. In addition, it is the only Indonesian Islamic bank with an overseas branch, located in Kuala Lumpur, Malaysia, demonstrating its strong commitment and presence in expanding Sharia-compliant banking services internationally. The bank focuses on providing a wide range of banking services aligned with Islamic values, offering products such as savings, financing, and digital banking. Through this virtual internship program, Bank Muamalat collaborates with Rakamin Academy to provide participants with real-world experience as Business Intelligence Analysts, focusing on data processing and generating meaningful insights to support strategic business decision-making.

# About Bank Muamalat Indonesia

# Case Study :

Sales and Product Distribution Performance

Analysis of PT Sejahtera Bersama

## Project Objectives:

- Identify sales trends based on product categories and regions
- Create an interactive dashboard to support business decision-making
- Provide strategic recommendations to increase sales

# Primary Key Identification

[DATASET](#)

Table

Column

Primary Key (PK)

Customers

CustomerID, FirstName, LastName,  
CustomerEmail, CustomerPhone,  
CustomerAddress, CustomerCity,  
CustomerState, CustomerZip

CustomerID 

Products

ProdNumber, ProdName,  
Category, Price

ProdNumber 

Orders

OrderID, Date,  
CustomerID, ProdNumber,  
Quantity

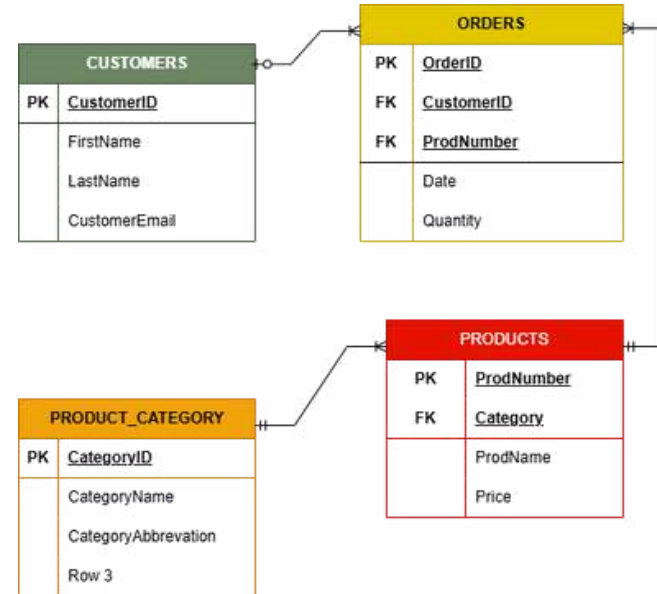
OrderID 

ProductCategory

CategoryID,  
CategoryName,  
CategoryAbbreviation

CategoryID 

# Entity Relationship Diagram (ERD)





# Data Processing in Google BigQuery

```
1 SELECT
2   c.CustomerID,
3   c.FirstName,
4   c.LastName,
5   c.CustomerEmail,
6   c.CustomerCity,
7   o.OrderID,
8   o.Date AS OrderDate,
9   o.Quantity AS OrderQty,
10  p.ProdNumber,
11  p.ProdName AS ProductName,
12  p.Price AS ProductPrice,
13  pc.CategoryID,
14  pc.CategoryName,
15  (p.Price * o.Quantity) AS TotalSales
16 FROM `finalproject-476410.master_sales.orders` AS o
17 JOIN `finalproject-476410.master_sales.customers` AS c
18   ON o.CustomerID = c.CustomerID
19 JOIN `finalproject-476410.master_sales.products` AS p
20   ON o.ProdNumber = p.ProdNumber
21 JOIN `finalproject-476410.master_sales.product_category` AS pc
22   ON p.Category = pc.CategoryID
23 LIMIT 20;
```

Result

CustomerID	FirstName	LastName	CustomerEmail	CustomerCity	OrderID	OrderDate	OrderQty	ProdNumber	ProductName	ProductPrice	CategoryID	CategoryName	TotalSales
923	Free	Klodovskij	kfree@leapfrog.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
1298	Mauli	Physick	mphysick@bigblue.com	Boston	404	2020-03-26	2	BP101	All Eyes Drone	19.99	1	Blueprints	19.98
835	Yehudi	Sabathe	yehudi@bigblue.com	Huntington	575	2020-05-08	2	BP101	All Eyes Drone	19.99	1	Blueprints	19.98
1480	Bryna	Cumberpatch	bcumberpatch@bigblue.com	Birmingham	1098	2020-08-25	2	BP101	All Eyes Drone	19.99	1	Blueprints	19.98
534	Wesley	Deemstad	wdeemstad@bigblue.com	New Orleans	1320	2020-10-10	2	BP101	All Eyes Drone	19.99	1	Blueprints	19.98
1564	Wagdy	Ragayer	wragayer@bigblue.com	Buffalo	1755	2021-01-14	2	BP101	All Eyes Drone	19.99	1	Blueprints	19.98
619	Sheryl	Brando	sbrando@bigblue.com	San Diego	1756	2021-01-14	2	BP101	All Eyes Drone	19.99	1	Blueprints	19.98
827	Kyria	Bjorkdyc	kbjorkdyc@bigblue.com	Mobile	2029	2021-03-11	2	BP101	All Eyes Drone	19.99	1	Blueprints	19.98
500	Ingemar	Johanning	ijohanning@bigblue.com	Newark City	2870	2021-06-27	2	BP101	All Eyes Drone	19.99	1	Blueprints	19.98
379	Alester	Chenney	achenney@bigblue.com	Battle Creek	3158	2021-11-21	2	BP101	All Eyes Drone	19.99	1	Blueprints	19.98
811	Anica	Berick	aberick@bigblue.com	Atlanta	3183	2021-11-26	2	BP101	All Eyes Drone	19.99	1	Blueprints	19.98
1072	Hershel	Culberty	hculberty@bigblue.com	Aurora	341	2020-03-15	3	BP101	All Eyes Drone	19.99	1	Blueprints	29.97
2039	Donnell	Standen	dstanden@bigblue.com	Rosario	589	2020-05-08	3	BP101	All Eyes Drone	19.99	1	Blueprints	29.97
1823	Jermy	Kuett	jkuett@bigblue.com	Dearborn	631	2020-05-15	3	BP101	All Eyes Drone	19.99	1	Blueprints	29.97
1427	Ranier	Hazpet	rhazpet@bigblue.com	Jackson	885	2020-07-10	3	BP101	All Eyes Drone	19.99	1	Blueprints	29.97
1015	Lynnea	Lapierre	llapierre@bigblue.com	Winston Salem	1131	2020-09-01	3	BP101	All Eyes Drone	19.99	1	Blueprints	29.97
1406	Daphne	Tomeola	dtomeola@bigblue.com	Charlotte	1895	2021-02-11	3	BP101	All Eyes Drone	19.99	1	Blueprints	29.97
1375	Alice	Chantrel	achantrel@bigblue.com	Lincoln	2055	2021-03-18	3	BP101	All Eyes Drone	19.99	1	Blueprints	29.97
1258	Daphani	Hout	dhout@bigblue.com	Los Angeles	2208	2021-04-18	3	BP101	All Eyes Drone	19.99	1	Blueprints	29.97
1554	Ave	Crippenhall	acrippenhall@bigblue.com	Tallahassee	2294	2021-05-07	3	BP101	All Eyes Drone	19.99	1	Blueprints	29.97

Final master table used for visualization in Looker Studio

ID	DATE	NAME	EMAIL	CITY	ORDERID	ORDERDATE	ORDERQTY	PRODNUMBER	PRODUCTNAME	PRODUCTPRICE	CATEGORYID	CATEGORYNAME	TOTALSALES
1	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
2	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
3	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
4	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
5	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
6	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
7	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
8	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
9	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
10	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
11	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
12	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
13	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
14	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
15	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
16	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
17	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
18	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
19	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99
20	2020-01-01	John	john@bigblue.com	Chicago	1788	2021-01-15	1	BP101	All Eyes Drone	19.99	1	Blueprints	9.99

The query combines four tables (Customers, Orders, Products, and ProductCategory) to create a master sales table containing customer, product, category, and order information. It also calculates total sales per transaction before exporting the data for visualization in Looker Studio.

# Data Visualization and Reporting

## Key Insights :

- Total sales reached \$1,754,750.57 with 11,654 items sold during the 2020–2021 period.
- The Robots and Drones categories provided the highest sales contribution compared to other categories.
- The cities of Washington and Houston are the regions with the largest total sales.
- The eBooks and Training Videos categories had the highest sales volume (quantity), indicating high demand for digital education-based products.



All sales values are represented in USD for visualization purposes



# Bussiness Recomendation



Based on the sales data analysis results, it is suggested that the company focus on increasing stock and promotion for the Robots and Drones categories, as these two categories contributed the highest sales revenue. By ensuring product availability and consistent promotional strategies, the company can maintain stable sales performance in this segment. Furthermore, a more aggressive digital marketing campaign should be executed in high-sales cities, such as Washington and Houston, to strengthen customer loyalty and expand market reach.

The company can also leverage Business Intelligence (BI) analysis to monitor product performance per region periodically, enabling quicker and more targeted decision-making regarding distribution and promotions. Finally, a product bundling strategy or offering thematic discounts could be applied to categories with high sales volume (large quantity) but low total sales value, such as eBooks or Training Videos, to increase the average transaction value and attract new customers.

# Conclusion



Overall, this project demonstrates how utilizing Business Intelligence tools such as Google BigQuery and Looker Studio can help the company transform raw data into meaningful insights. Through this analysis, a comprehensive overview of sales trends—based on product category, city, and time period—was obtained, which can serve as a foundation for strategic decision-making in marketing and inventory management.

This project also provides a deep understanding of the importance of data integration and interactive visualization in supporting data-driven decision-making processes. This experience serves as valuable learning in developing the analytical and technical skills required for a future career as a Business Intelligence Analyst.

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# Thank You.