

Kimia Farma Business Performance 2020-2023

Kimia Farma - Big Data Analytics

Presented by

Joevan Pramana Achmad



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Data Analyst & Data Scientist

I am a highly motivated and detail-oriented Data Analyst with a strong foundation in Information Systems. I possess hands-on experience in Python, SQL, and data analysis tools such as Pandas, NumPy, and Matplotlib. My expertise includes data visualization using Looker Studio and data processing on Google Cloud platforms.

Through academic projects and internships, I have developed practical skills in data cleaning, statistical analysis, and dashboard development. I am passionate about uncovering insights through data and turning them into strategic actions that drive business improvement. Eager to contribute to real-world data science, business intelligence, or analytics teams.



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Courses and Certification

Belajar Dasar AI | <https://www.dicoding.com/certificates/L4PQE90LOP01> <March, 2025>

Belajar Dasar Data Science | <https://www.dicoding.com/certificates/N9Z0903RRXG5> <March, 2025>

Belajar Dasar SQL | <https://www.dicoding.com/certificates/2VX3KV2RQXYQ> <March, 2025>

Belajar Dasar Visualisasi Data | <https://www.dicoding.com/certificates/MEPJQM53WX3V> <March, 2025>

Guide to Learn R with AI at DQLab |

https://academy.dqlab.id/Certificate_check/result/DQLABAI002MAFNQL#mycertificate <March, 2025>

Guide to Learn Python with AI at DQLab |

https://academy.dqlab.id/Certificate_check/result/DQLABAI0010FDGVT#mycertificate <March, 2025>

Guide to Learn SQL with AI at DQLab |

https://academy.dqlab.id/Certificate_check/result/DQLABAI003RMVUBN#mycertificate <March, 2025>

Introduction to Data Science With Python |

https://academy.dqlab.id/Certificate_check/result/DQLABINTP1N0PUBW#mycertificate <March, 2025>

Introduction to Data Science With R |

https://academy.dqlab.id/Certificate_check/result/DQLABBGINRVWIQTG#mycertificate <March, 2025>

Memulai Pemograman dengan Python | <https://www.dicoding.com/certificates/0LZ0RJGVKP65> <March, 2025>

About Company

Kimia Farma is one of Indonesia's leading pharmaceutical companies, established in 1817 and officially becoming a state-owned enterprise (SOE) in 1971. It operates in the pharmaceutical industry, covering manufacturing, distribution, retail pharmacy, and healthcare services. Kimia Farma is well known for its commitment to improving public health by producing high-quality, affordable medicines and healthcare products.

With an integrated business model, Kimia Farma manages a wide network of pharmacies, clinics, and diagnostic laboratories across Indonesia. The company also continues to innovate and expand its services to meet the growing healthcare needs of the Indonesian population while maintaining high standards of quality and regulatory compliance.



Project Portfolio

Kimia Farma, as one of the largest pharmaceutical companies in Indonesia, required a comprehensive analysis of its business performance to enhance operational efficiency. Utilizing historical data from 2020 to 2023, this project aims to uncover insights related to revenue trends, branch performance, and profit distribution across provinces.

The dataset includes key variables such as transaction dates, branch names and locations, total transactions, net sales, profit, and customer ratings.

This analysis focuses on several critical areas: annual revenue comparison, identifying branches with the highest transactions and net sales, and highlighting branches that have high customer ratings but low transaction volumes. Additionally, a geospatial map is employed to visualize profit distribution by province.

The final output is an interactive dashboard built in Looker Studio, designed to support Kimia Farma's management in making informed and strategic business decisions.



[My Github](#)



[My Youtube](#)

1. Importing Dataset to BigQuery



2. Tabel Analisa

kf_final_transa...	Query	Open in	+u
Schema	Details	Preview	Table Explorer
Preview			
Filter Enter property name or value			
<input type="checkbox"/>	Field name	Type	Mode
<input type="checkbox"/>	transaction_id	STRING	NULLABLE
<input type="checkbox"/>	date	DATE	NULLABLE
<input type="checkbox"/>	branch_id	INTEGER	NULLABLE
<input type="checkbox"/>	customer_name	STRING	NULLABLE
<input type="checkbox"/>	product_id	STRING	NULLABLE
<input type="checkbox"/>	price	INTEGER	NULLABLE
<input type="checkbox"/>	discount_percentage	FLOAT	NULLABLE
<input type="checkbox"/>	rating	FLOAT	NULLABLE





The kf_final_transactions table contains detailed records of transactions conducted at Kimia Farma branches.

The transaction_id column uniquely identifies each transaction, while date logs the transaction date. The branch_id specifies the branch location where the transaction occurred.

The customer_name stores the name of the customer, and product_id refers to the purchased product.

The price represents the original product price before any discount, discount_percentage captures the discount applied, and rating reflects the customer's satisfaction with the transaction.

2. Tabel Analisa

	kf_inventory	 Query	Open in ▾	
Schema	Details	Preview	Table Explorer	P
 Filter Enter property name or value				
<input type="checkbox"/>	Field name	Type	Mode	
<input type="checkbox"/>	Inventory_ID	STRING	NULLABLE	
<input type="checkbox"/>	branch_id	INTEGER	NULLABLE	
<input type="checkbox"/>	product_id	STRING	NULLABLE	
<input type="checkbox"/>	product_name	STRING	NULLABLE	
<input type="checkbox"/>	opname_stock	INTEGER	NULLABLE	

The kf_inventory table contains stock inventory data from each Kimia Farma branch.

The Inventory_ID serves as a unique identifier for each inventory record. The branch_id indicates the branch location where the inventory is recorded, while product_id and product_name provide information about the product being stored.

The opname_stock column records the quantity of stock available during the stock opname process.

2. Tabel Analisa

kf_kantor_cabang [Query](#) [Open in](#) [▼](#)

[Schema](#) [Details](#) [Preview](#) [Table Explorer](#) [Prev](#)

Filter

Enter property name or value



<input type="checkbox"/>	Field name	Type	Mode
<input type="checkbox"/>	branch_id	INTEGER	NULLABLE
<input type="checkbox"/>	branch_category	STRING	NULLABLE
<input type="checkbox"/>	branch_name	STRING	NULLABLE
<input type="checkbox"/>	kota	STRING	NULLABLE
<input type="checkbox"/>	provinsi	STRING	NULLABLE
<input type="checkbox"/>	rating	FLOAT	NULLABLE

The kf_kantor_cabang table contains detailed information about Kimia Farma branch offices.

The branch_id uniquely identifies each branch. The branch_category specifies the type of branch, while branch_name provides the name of the branch.

The kota and provinsi columns indicate the city and province where the branch is located. Finally, the rating column reflects the customer satisfaction rating for each branch.




2. Tabel Analisa

 kf_product	 Query	Open in ▾	+ Sha
Schema	Details	Preview	Table Explorer
Filter Enter property name or value			
<input type="checkbox"/>	Field name	Type	Mode
<input type="checkbox"/>	product_id	STRING	NULLABLE
<input type="checkbox"/>	product_name	STRING	NULLABLE
<input type="checkbox"/>	product_category	STRING	NULLABLE
<input type="checkbox"/>	price	INTEGER	NULLABLE

The kf_product table contains information about products sold at Kimia Farma.

The product_id column acts as a unique identifier for each product. product_name specifies the name of the product, and product_category classifies products based on their type. The price column indicates the selling price of each product.

2. Tabel Analisa

	kimia_farma_...	 Query	Open in ▾	 S
Schema Details Preview Table Explorer Preview				
Filter Enter property name or value				
<input type="checkbox"/>	Field name	Type	Mode	
<input type="checkbox"/>	transaction_id	STRING	NULLABLE	
<input type="checkbox"/>	date	DATE	NULLABLE	
<input type="checkbox"/>	branch_id	INTEGER	NULLABLE	
<input type="checkbox"/>	branch_name	STRING	NULLABLE	
<input type="checkbox"/>	kota	STRING	NULLABLE	
<input type="checkbox"/>	provinsi	STRING	NULLABLE	
<input type="checkbox"/>	rating_cabang	FLOAT	NULLABLE	
<input type="checkbox"/>	customer_name	STRING	NULLABLE	
<input type="checkbox"/>	product_id	STRING	NULLABLE	
<input type="checkbox"/>	product_name	STRING	NULLABLE	

The kimia_farma_transactions table contains detailed records of customer transactions at Kimia Farma branches.

The transaction_id column uniquely identifies each transaction, while date captures the transaction date. branch_id and branch_name indicate the branch where the transaction took place, with kota and provinsi specifying its location. rating_cabang shows the branch's customer rating. customer_name stores the buyer's name, and product_id and product_name provide information about the purchased product.

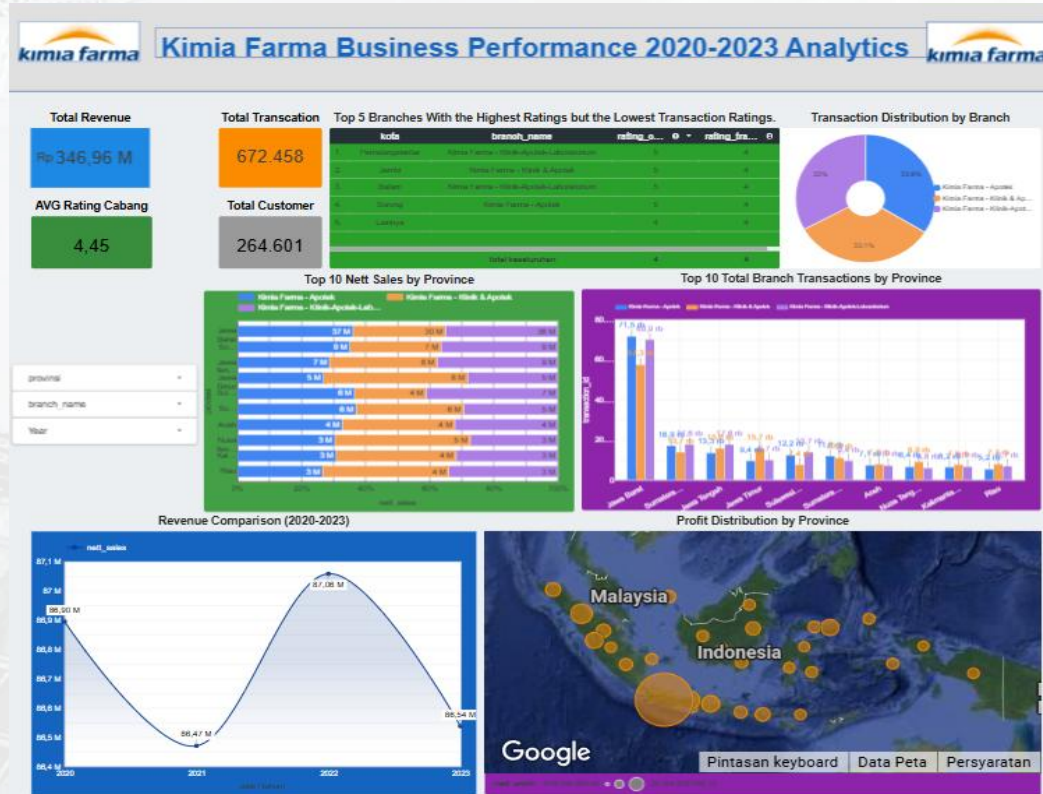
3. BigQuery Syntax

```
1 CREATE OR REPLACE TABLE proud-portfolio-458616-f7.kimia_farma.kimia_farma_analysis AS
2 SELECT
3     t.transaction_id,
4     t.date,
5     c.branch_id,
6     c.branch_name,
7     c.kota,
8     c.provinsi,
9     c.rating AS rating_cabang,
10    t.customer_name,
11    p.product_id,
12    p.product_name,
13    t.price AS actual_price,
14    t.discount_percentage,
15    (t.price - (t.price * t.discount_percentage / 100)) AS nett_sales,
16    CASE
17        WHEN t.price <= 50000 THEN 0.10
18        WHEN t.price > 50000 AND t.price <= 100000 THEN 0.15
19        WHEN t.price > 100000 AND t.price <= 300000 THEN 0.20
20        WHEN t.price > 300000 AND t.price <= 500000 THEN 0.25
21        ELSE 0.30
22    END AS persentase_gross_laba,
23    ((t.price - (t.price * t.discount_percentage / 100)) *
24    CASE
25        WHEN t.price <= 50000 THEN 0.10
26        WHEN t.price > 50000 AND t.price <= 100000 THEN 0.15
27        WHEN t.price > 100000 AND t.price <= 300000 THEN 0.20
28        WHEN t.price > 300000 AND t.price <= 500000 THEN 0.25
29        ELSE 0.30
30    END) AS nett_profit,
31    t.rating AS rating_transaksi
32 FROM proud-portfolio-458616-f7.kimia_farma.kf_final_transaction t
33 JOIN proud-portfolio-458616-f7.kimia_farma.kf_kantor_cabang c ON t.branch_id = c.branch_id
34 JOIN proud-portfolio-458616-f7.kimia_farma.kf_product p ON t.product_id = p.product_id;
```


3. Explain BigQuery Syntax

This SQL script creates a new table named `kimia_farma_analysis` by combining data from three existing tables: `kf_final_transaction` (alias `t`), `kf_kantor_cabang` (alias `c`), and `kf_product` (alias `p`). It selects various fields such as transaction ID, date, branch details, product information, and customer details. Additionally, it performs several calculated fields, including `nett_sales`, calculated by applying a discount percentage to the product price; `nett_profit`, calculated using conditional logic (CASE) based on the price range and applying a specific profit margin; and `rating_transaksi`, which represents the customer rating for each transaction. The query uses JOIN operations to integrate data across branches (`branch_id`) and products (`product_id`), creating a unified dataset that can be used for further analysis and reporting.

4. Dashboard Performance Analytics



Thank You



Rakamin
Academy



kimia farma