

Business Performance Analysis of Kimia Farma (2020-2023)

Kimia Farma - Big Data Analytics

Presented by
Muhammad Aqlani Wafi

Muhammad Aqlani Wafi

Jobseeker

Final-year Mathematics student specializing in data science, with a strong foundation in machine learning, statistics. Proficient in Python, Excel, and SQL for data processing and machine learning applications. Passionate about data analytics. Skilled in solving complex problems and building data-driven models to derive valuable insights.



Ciputat, Tangerang Selatan



aqlani.wafi10@gmail.com



[muhammad-aqlani-wafi](https://www.linkedin.com/in/muhammad-aqlani-wafi)

***notes: just a sample page**

About Company

Kimia Farma is Indonesia's first pharmaceutical company, established by the Dutch East Indies government in 1817 under the name **NV Chemicalien Handle Rathkamp & Co.** Following the nationalization policy of former Dutch companies after Indonesia's independence, the Indonesian government merged several pharmaceutical companies in 1958 to form **Perusahaan Negara Farmasi (PNF) Bhinneka Kimia Farma**. On August 16, 1971, its legal status was transformed into a **Perseroan Terbatas (Limited Liability Company)**, officially becoming **PT Kimia Farma (Persero)**.



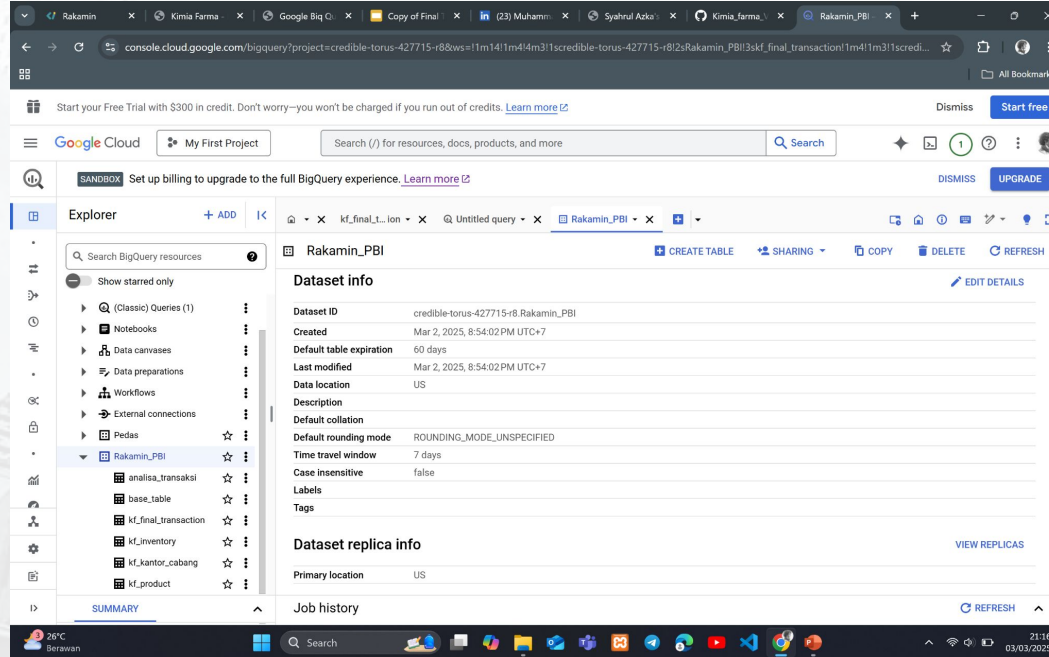
Project Portfolio

As a **Big Data Analytics Intern** at **Kimia Farma**, you will face a series of challenges that require a deep understanding of data and strong analytical skills. One of your main projects will be **evaluating Kimia Farma's business performance from 2020 to 2023**.

Project explanation video here!

<buat hyperlink di kata "here" di atas, sisipkan link youtube yang berisi rekaman anda melakukan presentasi penjelasan hasil pengerjaan final task. Hapus pesan ini jika anda telah memahami pesan ini>

1. Importing Dataset to BigQuery



The screenshot displays the Google Cloud BigQuery console interface. The left sidebar shows the 'Explorer' view with a search bar and a list of resources. The 'Rakamin_PBI' dataset is selected, and its details are shown on the right. The 'Dataset info' section includes fields for Dataset ID, Created, Default table expiration, Last modified, Data location, Description, Default collation, Default rounding mode, Time travel window, Case insensitive, Labels, and Tags. The 'Dataset replica info' section shows the Primary location as US. The 'Job history' section is also visible at the bottom.

Dataset info	
Dataset ID	credible-torus-427715-r8-Rakamin_PBI
Created	Mar 2, 2025, 8:54:02 PM UTC+7
Default table expiration	60 days
Last modified	Mar 2, 2025, 8:54:02 PM UTC+7
Data location	US
Description	
Default collation	
Default rounding mode	ROUNDING_MODE_UNSPECIFIED
Time travel window	7 days
Case insensitive	false
Labels	
Tags	

Dataset replica info	
Primary location	US

Job history	
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https://console.cloud.google.com/bigquery?ws=!1m4!1m3!3m2!1scredible-torus-427715-r8!2sRakamin_PBI

2. Tabel Analisa

```
1 CREATE OR REPLACE TABLE Rakamin_PBI.base_table AS
2 SELECT
3     j.transaction_id,
4     j.date,
5     j.customer_name,
6     j.branch_id,
7     b.branch_name,
8     b.kota,
9     b.provinsi,
10    p.product_id,
11    p.product_name,
12    p.product_category,
13    j.price AS original_price,
14    j.discount_percentage,
15    (j.price * (1 - j.discount_percentage / 100)) AS final_price,
16 e, j.rating AS transaction_rating,
17    b.rating AS branch_rating,
18    i.opname_stock
19 FROM Rakamin_PBI.kf_final_transaction j
20 LEFT JOIN Rakamin_PBI.kf_kantor_cabang b
21     ON j.branch_id = b.branch_id
22 LEFT JOIN Rakamin_PBI.kf_product p
23     ON j.product_id = p.product_id
24 LEFT JOIN Rakamin_PBI.kf_inventory i
25     ON j.product_id = i.product_id AND j.branch_id = i.branch_id;
26
```

Strategy Explanation for Data Mart Creation

The query creates a **base table** that integrates transaction, branch, product, and inventory data to enable comprehensive analysis.

Key Steps in the Query:

1. **Joining Transactions (`kf_final_transaction`) with Branch Data (`kf_kantor_cabang`)**
 - Retrieves `branch_name`, `kota`, `provinsi`, and `branch_rating`.
2. **Joining with Product Data (`kf_product`)**
 - Adds `product_name` and `product_category`.
3. **Joining with Inventory Data (`kf_inventory`)**
 - Matches products by `product_id` and `branch_id` to get `opname_stock`.
4. **Calculating Key Metrics:**
 - `final_price`: Price after applying `discount_percentage`.
 - `transaction_rating` and `branch_rating`: For customer feedback analysis.

This **data mart** serves as a foundation for analyzing sales performance, product availability, and customer satisfaction.

3. BigQuery Syntax

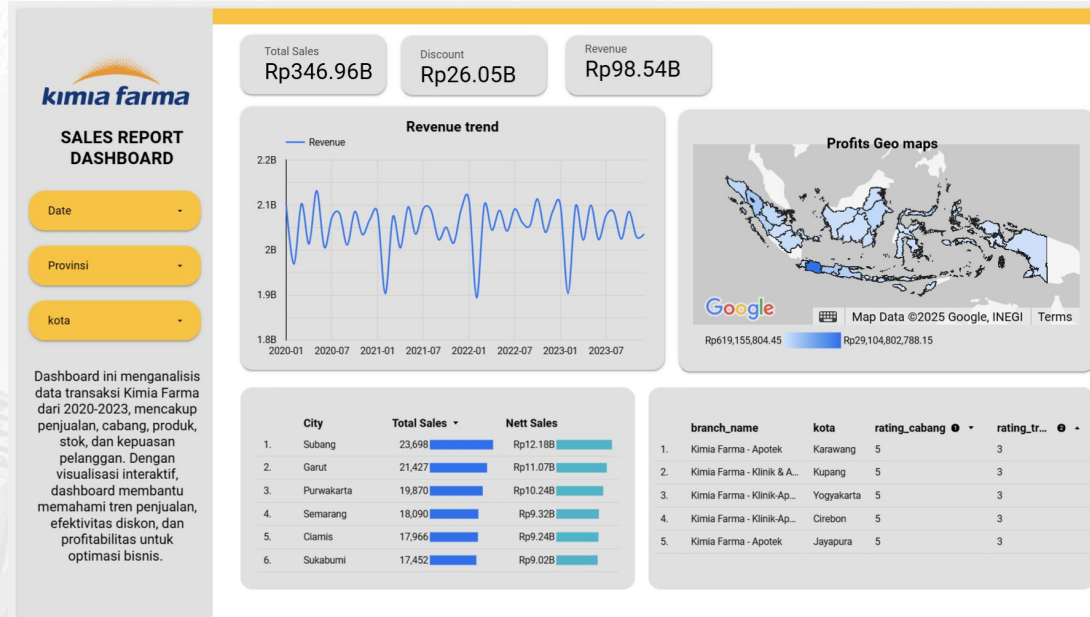
```
1 CREATE OR REPLACE TABLE Rakamin_PBI.analisa_transaksi AS
2 SELECT
3   j.transaction_id,
4   j.date,
5   j.branch_id,
6   b.branch_name,
7   b.kota,
8   b.provinsi,
9   b.rating AS rating_cabang,
10  j.customer_name,
11  j.product_id,
12  p.product_name,
13  j.price AS actual_price,
14  j.discount_percentage,
15  -- Menentukan persentase gross laba berdasarkan kategori harga
16  CASE
17    WHEN j.price <= 50000 THEN 0.10
18    WHEN j.price > 50000 AND j.price <= 100000 THEN 0.15
19    WHEN j.price > 100000 AND j.price <= 300000 THEN 0.20
20    WHEN j.price > 300000 AND j.price <= 500000 THEN 0.25
21    ELSE 0.30
22  END AS persentase_gross_laba,
23  -- Harga setelah diskon
24  (j.price * (1 - j.discount_percentage / 100)) AS nett_sales,
25  -- Perhitungan nett profit (nett sales * persentase laba)
26  (j.price * (1 - j.discount_percentage / 100)) *
27  CASE
28    WHEN j.price <= 50000 THEN 0.10
29    WHEN j.price > 50000 AND j.price <= 100000 THEN 0.15
30    WHEN j.price > 100000 AND j.price <= 300000 THEN 0.20
31    WHEN j.price > 300000 AND j.price <= 500000 THEN 0.25
32    ELSE 0.30
33  END AS nett_profit,
34  j.rating AS rating_transaksi
35 FROM Rakamin_PBI.kf_final_transaction j
36 LEFT JOIN Rakamin_PBI.kf_kantor_cabang b
37   ON j.branch_id = b.branch_id
38 LEFT JOIN Rakamin_PBI.kf_product p
39   ON j.product_id = p.product_id;
40
```

This query creates **Rakamin_PBI.analisa_transaksi**, a transaction analysis table that provides key insights into sales performance, customer transactions, and branch performance.

Key Steps in the Query:

- Joining Transaction Data (**kf_final_transaction**) with Branch Data (**kf_kantor_cabang**)**
 - Retrieves branch details (**branch_name**, **kota**, **provinsi**, **rating_cabang**).
- Joining with Product Data (**kf_product**)**
 - Adds **product_name** for better product-level analysis.
- Gross Profit Margin Calculation:**
 - Determines **persentase_gross_laba** based on product price categories:
 - $\leq 50,000 \rightarrow 10\%$
 - $50,001 - 100,000 \rightarrow 15\%$
 - $100,001 - 300,000 \rightarrow 20\%$
 - $300,001 - 500,000 \rightarrow 25\%$
 - $500,000 \rightarrow 30\%$
- Net Sales Calculation:**
 - nett_sales** = Price after applying the discount.
- Net Profit Calculation:**
 - nett_profit** = **nett_sales** * **persentase_gross_laba**.
- Customer Satisfaction Analysis:**
 - Includes **rating_transaksi** to measure transaction experience.

4. Dashboard Performance Analytics



<https://lookerstudio.google.com/reporting/d662753c-9028-463e-8885-9546ecdec99e>

Thank You



Rakamin
Academy



Logo Company