

Performance Analytics Kimia Farma Business Year 2020-2030

Kimia Farma – Big Data Analytics



Presented by
Anggita Devani Salsabila

Resume

Anggita Devani Salsabila

IPB University

I am a final-year agribusiness student at IPB University. I am interested in administration, finance, and data analysis. I have gained experience in field data sampling techniques, data cleaning, inference drawing, and data visualization. I am supported by a good skill in communication, time management and enjoy discussing. I am also regularly developing my abilities through various activities so that I can continue to process and progress.

Experience

Feb - March 2025 | PT Kimia Farma - Big Data Analytics Virtual Intern by Rakamin

Evaluating the business performance of Kimia Farma 2020–2023 using Google Data Studio and SQL querying.

Sept - Nov 2024 | PT Perkebunan Buah Subang - Project Management Office

Responsible for optimizing the durian plantation production process through cycle time data analysis.



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About Company

Kimia Farma adalah perusahaan industri farmasi pertama di Indonesia dengan visi menjadi perusahaan *Healthcare* pilihan utama yang terintegrasi dan menghasilkan nilai yang berkesinambungan.

PT Kimia Farma Tbk merupakan *pioneer* dalam industri farmasi Indonesia yang telah berkembang menjadi perusahaan yang menyediakan pelayanan kesehatan terintegrasi dari hulu ke hilir. Kimia Farma memiliki bidang usaha utama yaitu : Manufaktur Farmasi yang didukung oleh Riset dan Pengembangan; Distribusi dan Perdagangan; Pemasaran; Ritel Farmasi; Laboratorium Klinik dan Klinik Kesehatan.

1918

1971

Didirikan oleh Pemerintah Hindia Belanda dengan nama perusahaan NV Chemicalien Handle Rathkamp & Co.

Perusahaan berubah nama menjadi PT Kimia Farma (Persero).

Terbentuknya Holding BUMN Farmasi dimana Kimia Farma menjadi anggotanya.



PROJECT PORTFOLIO

Projek ini dilakukan untuk mengevaluasi kinerja bisnis Kimia Farma tahun 2020 - 2023 dengan menggunakan beberapa dataset utama, diantaranya yaitu:

- **kf_final_transaction:** Merupakan dataset yang berisi data transaksi pelanggan.
- **kf_inventory:** Merupakan dataset yang berisi data ketersediaan stok obat.
- **kf_kantor_cabang:** Merupakan dataset yang berisi data ketersediaan stok obat.
- **kf_product:** Merupakan dataset yang berisi data harga suatu produk.

[Project Explanation Video!!](#)

The logo for Kimia Farma features a stylized orange and yellow sunburst graphic above the company name "kimia farma" in a bold, lowercase, sans-serif font.

kimia farma

DATASET

kf_final_transaction

transaction_id	date	branch_id	customer_name	product_id	price	discount_percent	rating
TRX5103706	2021-08-25	93529	Derrick Wright III	KF116	251700	0.1	3.0
TRX5388139	2020-12-29	24832	Elizabeth Ramos	KF116	251700	0.12	3.0
TRX7251897	2020-02-03	20505	Meghan Warner	KF116	251700	0.09	3.0
TRX4943675	2022-09-09	17678	Steven Roberts	KF116	251700	0.1	3.0
TRX3469820	2020-06-20	28315	Linda Bruce DDS	KF116	251700	0.07	3.0
TRX1213133	2021-09-17	22280	Cory Castro	KF116	251700	0.11	3.0
TRX2020131	2020-12-16	40028	Stephanie Boone	KF116	251700	0.03	3.0
TRX5015870	2022-08-17	41343	Mary Hughes	KF116	251700	0.03	3.0

kf_inventory

Inventory_ID	branch_id	product_id	product_name	opname_stock
INV1828570	14724	KF116	Psycholeptics drugs, Hypnotics...	0
INV6358449	30475	KF116	Psycholeptics drugs, Hypnotics...	0
INV8727436	24294	KF116	Psycholeptics drugs, Hypnotics...	0
INV9842687	81965	KF116	Psycholeptics drugs, Hypnotics...	0
INV6215728	67373	KF116	Psycholeptics drugs, Hypnotics...	0
INV7363800	35354	KF116	Psycholeptics drugs, Hypnotics...	0
INV3163646	15943	KF116	Psycholeptics drugs, Hypnotics...	0

DATASET

kf_kantor_cabang

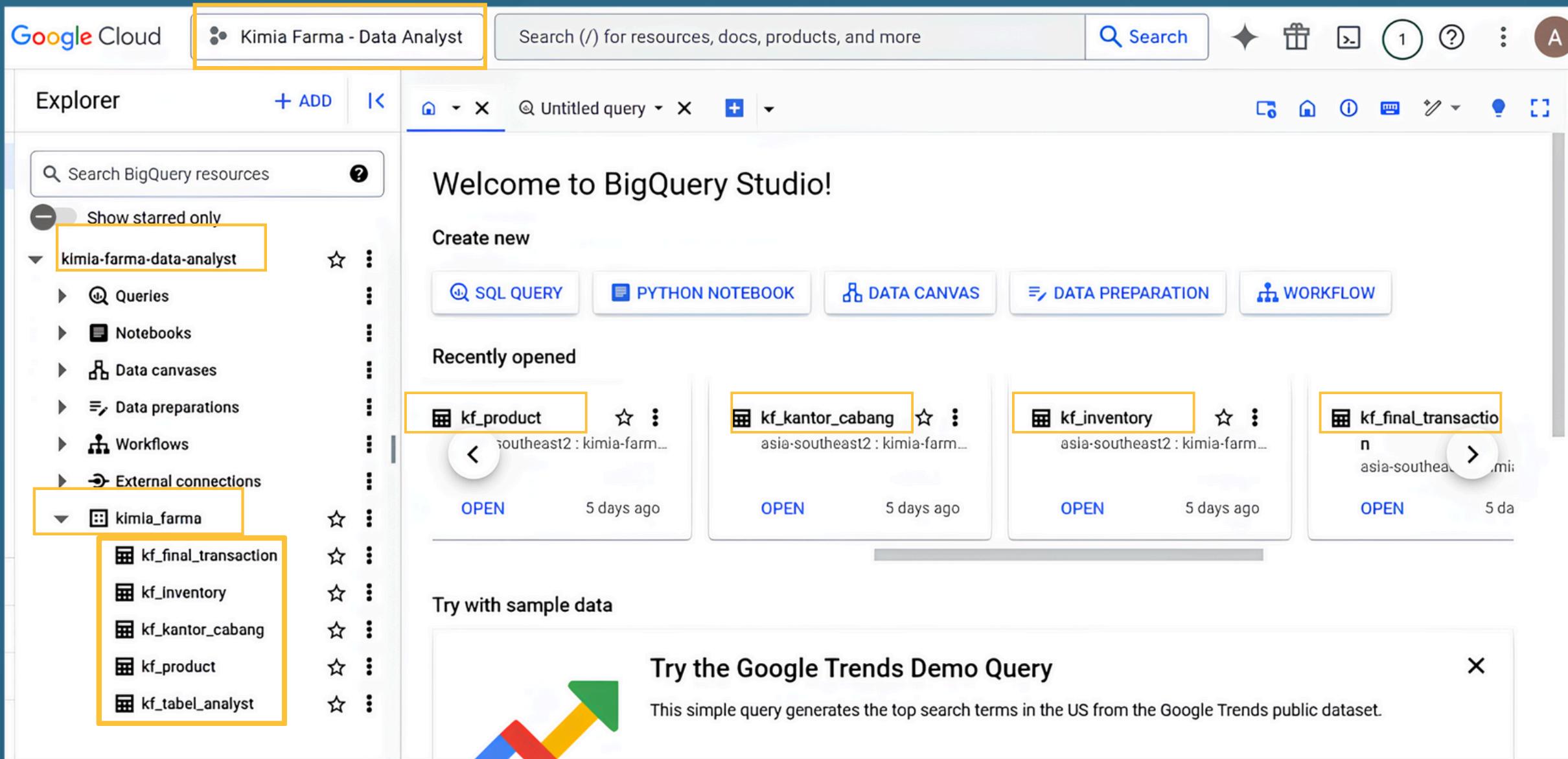
branch_id	branch_category	branch_name	kota	provinsi	rating
39578	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.7
55171	Apotek	Kimia Farma - Apotek	Ambon	Maluku	5.0
11400	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.1
38733	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.9
93401	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.5
68034	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.1
59260	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.1

kf_product

product_id	product_name	product_category	price
KF766	Anti-inflammatory and antirheumatic products, non-steroids, Acetic acid derivatives and related substances	M01AB	108500
KF400	Anti-inflammatory and antirheumatic products, non-steroids, Acetic acid derivatives and related substances	M01AB	359500
KF312	Anti-inflammatory and antirheumatic products, non-steroids, Acetic acid derivatives and related substances	N02BE/B	774700
KF723	Anti-inflammatory and antirheumatic products, non-steroids, Acetic acid derivatives and related substances	N02BE/B	739100

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IMPORTING DATASET TO BIGQUERY



1. Membuat proyek baru dengan nama "Kimia Farma - Data Analyst".
2. Membuat dataset baru dengan nama "kimia_farma".
3. Memasukkan dataset-dataset (csv) yang tersedia di dalam dataset "kimia_farma".

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IMPORTING DATASET TO BIGQUERY

The screenshot shows the Google Cloud BigQuery Explorer interface. The top navigation bar includes 'Google Cloud', 'Kimia Farma - Data Analyst', a search bar, and a user icon. The main area displays the schema for the 'kf_final_transaction' table. The schema table has columns for Field name, Type, Mode, Key, Collation, Default Value, Policy Tags, and Description. Fields listed include transaction_id, date, branch_id, customer_name, product_id, price, discount_percentage, and rating. A yellow box highlights the entire schema table.

The screenshot shows the Google Cloud BigQuery Explorer interface. The top navigation bar includes 'Google Cloud', 'Kimia Farma - Data Analyst', a search bar, and a user icon. The main area displays the schema for the 'kf_inventory' table. The schema table has columns for Field name, Type, Mode, Key, Collation, Default Value, Policy Tags, and Description. Fields listed include Inventory_ID, branch_id, product_id, product_name, and opname_stock. A yellow box highlights the entire schema table.

The screenshot shows the Google Cloud BigQuery Explorer interface. The top navigation bar includes 'Google Cloud', 'Kimia Farma - Data Analyst', a search bar, and a user icon. The main area displays the schema for the 'kf_product' table. The schema table has columns for Field name, Type, Mode, Key, Collation, Default Value, Policy Tags, and Description. Fields listed include product_id, product_name, product_category, and price. A yellow box highlights the entire schema table.

The screenshot shows the Google Cloud BigQuery Explorer interface. The top navigation bar includes 'Google Cloud', 'Kimia Farma - Data Analyst', a search bar, and a user icon. The main area displays the schema for the 'kf_kantor_cabang' table. The schema table has columns for Field name, Type, Mode, Key, Collation, Default Value, Policy Tags, and Description. Fields listed include branch_id, branch_category, branch_name, kota, provinsi, and rating. A yellow box highlights the entire schema table.

20 strips @ 10 tablets
EUROSEMIDE 40 mg

CAPTOPRIL 12.5 mg

500 mg
jumia Farma

2

TABEL ANALISA

The screenshot shows the Google Cloud BigQuery Table Explorer interface. The top navigation bar includes 'Google Cloud' and 'Kimia Farma - Data Analyst'. A search bar at the top right contains the placeholder 'Search (/) for resources, docs, products, and more'. Below the search bar are various icons for file operations like star, gift, copy, snapshot, delete, export, refresh, and help.

The main area displays a table titled 'kf_tabel_analyst'. The table has columns: transaction_id, date, branch_id, branch_name, kota, provinsi, rating_cabang, and customer_name. The table contains 17 rows of data. The 'PREVIEW' tab is selected in the top navigation bar of the table view.

On the left side, the 'Explorer' sidebar lists datasets: 'kimia-farma-data-analyst' (containing 'Queries', 'Notebooks', 'Data canvases', 'Data preparations', 'Workflows', 'External connections') and 'kimia_farma' (containing 'kf_final_transaction', 'kf_inventory', 'kf_kantor_cabang', 'kf_product', 'kf_tabel_analyst'). The 'kf_tabel_analyst' item is highlighted with a yellow box.

At the bottom of the table view, there are pagination controls for 'Results per page: 50' and '1 – 50 of 672458'.

transaction_id	date	branch_id	branch_name	kota	provinsi	rating_cabang	customer_name
1 TRX5103706	2021-08-25	93529	Kimia Farma - Klinik & Apotek	Yogyakarta	DI Yogyakarta	4.3	Derrick Wright II
2 TRX5388139	2020-12-29	24832	Kimia Farma - Klinik-Apotek-La...	Pekanbaru	Riau	4.2	Elizabeth Ramo
3 TRX7251897	2020-02-03	20505	Kimia Farma - Apotek	Cilacap	Jawa Tengah	4.5	Meghan Warner
4 TRX4943675	2022-09-09	17678	Kimia Farma - Klinik & Apotek	Subang	Jawa Barat	4.8	Steven Roberts
5 TRX3469820	2020-06-20	28315	Kimia Farma - Klinik-Apotek-La...	Sukabumi	Jawa Barat	3.9	Linda Bruce DD:
6 TRX1213133	2021-09-17	22280	Kimia Farma - Apotek	Batam	Kepulauan Riau	4.5	Cory Castro
7 TRX2020131	2020-12-16	40028	Kimia Farma - Klinik-Apotek-La...	Balikpapan	Kalimantan Timur	4.0	Stephanie Boon
8 TRX5015870	2022-08-17	41343	Kimia Farma - Apotek	Semarang	Jawa Tengah	4.0	Mary Hughes
9 TRX7064077	2021-06-21	86546	Kimia Farma - Klinik & Apotek	Pematangsiantar	Sumatera Utara	4.5	Tamara Bruce
10 TRX5979742	2020-12-31	18235	Kimia Farma - Klinik & Apotek	Pekanbaru	Riau	4.8	Aaron Reed
11 TRX2209141	2021-03-20	59571	Kimia Farma - Klinik-Apotek-La...	Tarakan	Kalimantan Utara	4.9	Nancy Kennedy
12 TRX5385534	2023-03-17	69280	Kimia Farma - Klinik-Apotek-La...	Purwakarta	Jawa Barat	4.0	Paul Morales
13 TRX9155202	2020-04-11	29626	Kimia Farma - Klinik & Apotek	Bitung	Sulawesi Utara	4.6	Stephen Jones
14 TRX1702542	2022-09-15	48590	Kimia Farma - Klinik & Apotek	Garut	Jawa Barat	4.9	Zachary White
15 TRX8205780	2022-10-19	37915	Kimia Farma - Klinik & Apotek	Cianjur	Jawa Barat	3.9	Jennifer Larsen
16 TRX3208671	2023-12-20	66935	Kimia Farma - Klinik & Apotek	Madiun	Jawa Timur	4.3	Michael Mccoy
17 TRX2085415	2022-02-11	17678	Kimia Farma - Klinik & Apotek	Subang	Jawa Barat	4.8	Anthony Rice

Dilakukan pembuatan tabel analisa dengan membuat bigquery syntax berdasarkan hasil agregasi dari 4 dataset sebelumnya. Pada gambar, tabel analisa dibuat di dalam dataset baru yaitu "kf_tabel_analyst".

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TABEL ANALISA

KOLOM PADA TABEL ANALISA

transaction_id	date	branch_id	branch_name	kota	provinsi	rating_cabang	customer_name
TRX5103706	2021-08-25	93529	Kimia Farma - Klinik & Apotek	Yogyakarta	DI Yogyakarta	4.3	Derrick Wright III
TRX5388139	2020-12-29	24832	Kimia Farma - Klinik-Apotek-La...	Pekanbaru	Riau	4.2	Elizabeth Ramos
TRX7251897	2020-02-03	20505	Kimia Farma - Apotek	Cilacap	Jawa Tengah	4.5	Meghan Warner
TRX4943675	2022-09-09	17678	Kimia Farma - Klinik & Apotek	Subang	Jawa Barat	4.8	Steven Roberts
TRX3469820	2020-06-20	28315	Kimia Farma - Klinik-Apotek-La...	Sukabumi	Jawa Barat	3.9	Linda Bruce DDS
TRX1213133	2021-09-17	22280	Kimia Farma - Apotek	Batam	Kepulauan Riau	4.5	Cory Castro
TRX2020131	2020-12-16	40028	Kimia Farma - Klinik-Apotek-La...	Balikpapan	Kalimantan Timur	4.0	Stephanie Boone
TRX5015870	2022-08-17	41343	Kimia Farma - Apotek	Semarang	Jawa Tengah	4.0	Mary Hughes
TRX7064077	2021-06-21	86546	Kimia Farma - Klinik & Apotek	Pematangsiantar	Sumatera Utara	4.5	Tamara Bruce
TRX5979742	2020-12-31	18235	Kimia Farma - Klinik & Apotek	Pekanbaru	Riau	4.8	Aaron Reed

customer_name	product_id	product_name	actual_price	discount_percent	persentase_gros	nett_sales	nett_profit	rating_transaksi
Derrick Wright III	KF116	Psycholeptics drugs, Hypnotics...	251700	0.1	0.2	226530.0	50340.0	3.0
Elizabeth Ramos	KF116	Psycholeptics drugs, Hypnotics...	251700	0.12	0.2	221496.0	50340.0	3.0
Meghan Warner	KF116	Psycholeptics drugs, Hypnotics...	251700	0.09	0.2	229047.0	50340.0	3.0
Steven Roberts	KF116	Psycholeptics drugs, Hypnotics...	251700	0.1	0.2	226530.0	50340.0	3.0
Linda Bruce DDS	KF116	Psycholeptics drugs, Hypnotics...	251700	0.07	0.2	234080.999...	50340.0	3.0
Cory Castro	KF116	Psycholeptics drugs, Hypnotics...	251700	0.11	0.2	224013.0	50340.0	3.0
Stephanie Boone	KF116	Psycholeptics drugs, Hypnotics...	251700	0.03	0.2	244149.0	50340.0	3.0
Mary Hughes	KF116	Psycholeptics drugs, Hypnotics...	251700	0.03	0.2	244149.0	50340.0	3.0
Tamara Bruce	KF116	Psycholeptics drugs, Hypnotics...	251700	0.04	0.2	241632.0	50340.0	3.0



3

BIGQUERY SYNTAX

```
CREATE TABLE kimia_farma.kf_tabel_analyst AS  
SELECT  
    ft.transaction_id,  
    ft.date,  
    ft.branch_id,  
    kc.branch_name,  
    kc.kota,  
    kc.provinsi,  
    kc.rating AS rating_cabang,  
    ft.customer_name,  
    ft.product_id,  
    p.product_name,  
    p.price AS actual_price,  
    ft.discount_percentage,  
    ft.rating AS rating_transaksi,
```

SYNTAX CREATE TABLE & SELECT

Membuat tabel baru bernama "tabel_analyst" di dataset kimia_farma, pemilihan kolom berdasarkan tabel sebelumnya, yaitu:
kf_final_transaction : **ft**
kf_kantor_cabang : **kc**
kf_product : **p**

Perubahan nama kolom:
kc.rating : **rating_cabang**
p.price : **actual_price**
ft.rating : **rating_transaksi**

[Repository GitHub!!](#)

3

BIGQUERY SYNTAX

CASE

```
WHEN p.price <= 50000 THEN 0.1
WHEN p.price BETWEEN 50000 AND 100000 THEN 0.15
WHEN p.price BETWEEN 100000 AND 300000 THEN 0.2
WHEN p.price BETWEEN 300000 AND 500000 THEN 0.25
WHEN p.price > 500000 THEN 0.3
END AS persentase_gross_laba,
(p.price * (1-ft.discount_percentage)) AS nett_sales,
(p.price * (1-ft.discount_percentage) *
(CASE
WHEN p.price <= 50000 THEN 0.1
WHEN p.price BETWEEN 50000 AND 100000 THEN 0.15
WHEN p.price BETWEEN 100000 AND 300000 THEN 0.2
WHEN p.price BETWEEN 300000 AND 500000 THEN 0.25
ELSE 0.3
END)) AS nett_profit,
```

SYNTAX CASE STATEMENT

Menghitung “**persentase_gross_laba**” berdasarkan ketentuan dan menjadikannya kolom baru.

Menghitung “**nett_sales**” dengan mengurangi diskon dari harga asli dan menjadikannya kolom baru.

Menghitung “**nett_profit**” dengan mengalikan nett_sales dengan persentase_gross_laba dan menjadikannya kolom baru.

3

BIGQUERY SYNTAX

```
FROM  
    kimia_farma.kf_final_transaction AS ft  
JOIN  
    kimia_farma.kf_kantor_cabang AS kc  
ON  ft.branch_id = kc.branch_id  
JOIN  
    kimia_farma.kf_product AS p  
ON  ft.product_id = p.product_id;
```

SYNTAX FROM, JOIN, & ON

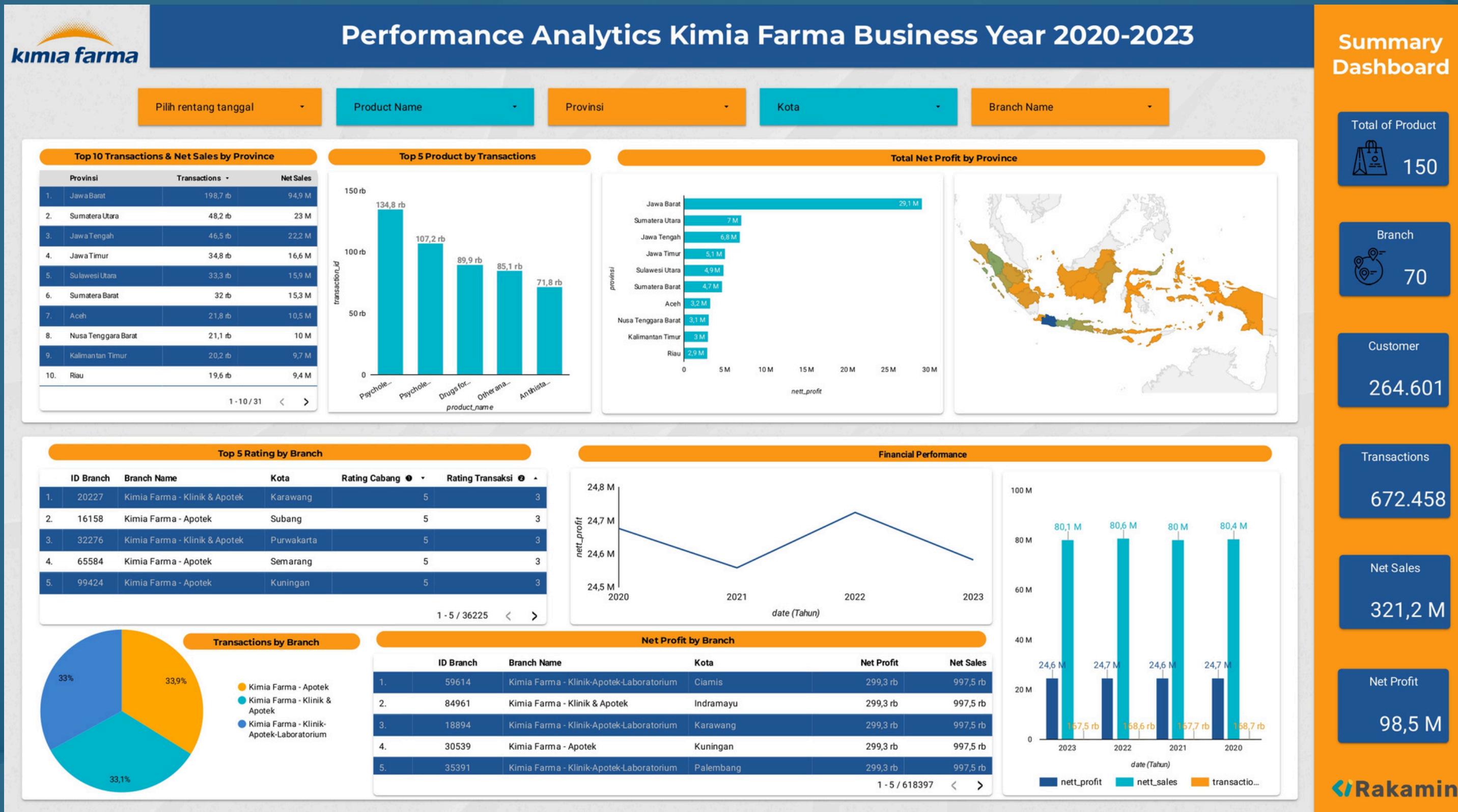
Menentukan beberapa sumber tabel dan digabungkan (join).

Menggabungkan antara kf_final_transaction (ft) dan kf_kantor_cabang (kc) berdasarkan branch_id.

Menggabungkan antara kf_final_transaction (ft) dan kf_product (p) berdasarkan product_id.

4

DASHBOARD PERFORMANCE ANALYTICS



Summary Dashboard

Total of Product
150

Branch
70

Customer
264.601

Transactions
672.458

Net Sales
321,2 M

Net Profit
98,5 M

Rakamin

Dashboard Looker Studio!!

THANK YOU

