Rakamin Academy X kimia farma

Kimia Farma Performance Analytics

Business Year 2020-2023

Kimia Farma - Big Data Analytics

Project Based Internship

Presented by

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Rakamin Academy

Muchammad Farchan Fachrudin

Fresh Graduate of Information System Student

A fresh graduate of information systems student from Trunojoyo University, Madura. I am actively involved in many things, such as mobile and website UI/UX design, creating websites, and data analysis. I am constantly trying to improve my skills and explore new insights. Apart from that, my hobbies include swimming and cycling.

About Company

Kimia Farma was the first pharmaceutical industrial company in Indonesia which was founded by the Dutch East Indies Government in 1817. The name of this company was originally NV Chemicalien Handle Rathkamp & Co. Based on the nationalization policy of former Dutch companies in the early days of independence, in 1958, the Government of the Republic of Indonesia merged a number of pharmaceutical companies into PNF (Pharmaceutical State Company) Bhinneka Kimia Farma. Then on August 16 1971, the legal entity form of PNF was changed to a Limited Liability Company, so the company name changed to PT Kimia Farma (Persero).

Project explanation video here!
https://youtu.be/Sx5v_Zbsqls

Project Portfolio

This project aims to provide in-depth insight into Kimia Farma's sales performance through detailed data analysis using the data provided. The first step is to import the dataset into the BigQuery platform to ensure the required data is available. Step two, create an analysis table using BigQuery to identify sales patterns, consumer interests, and sales distribution patterns. And the third, create a dashboard visualization of the data pattern. The results of the analysis provide valuable insights into Kimia Farma's sales performance, including the factors that influence it.

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The Challenges

Challenge #1

Importing Dataset to BigQuery

Challenge #2

Create Analytics Tabel in BigQuery

Challenge #3

Create Performance Dashboard in Google Looker

Project explanation video here!
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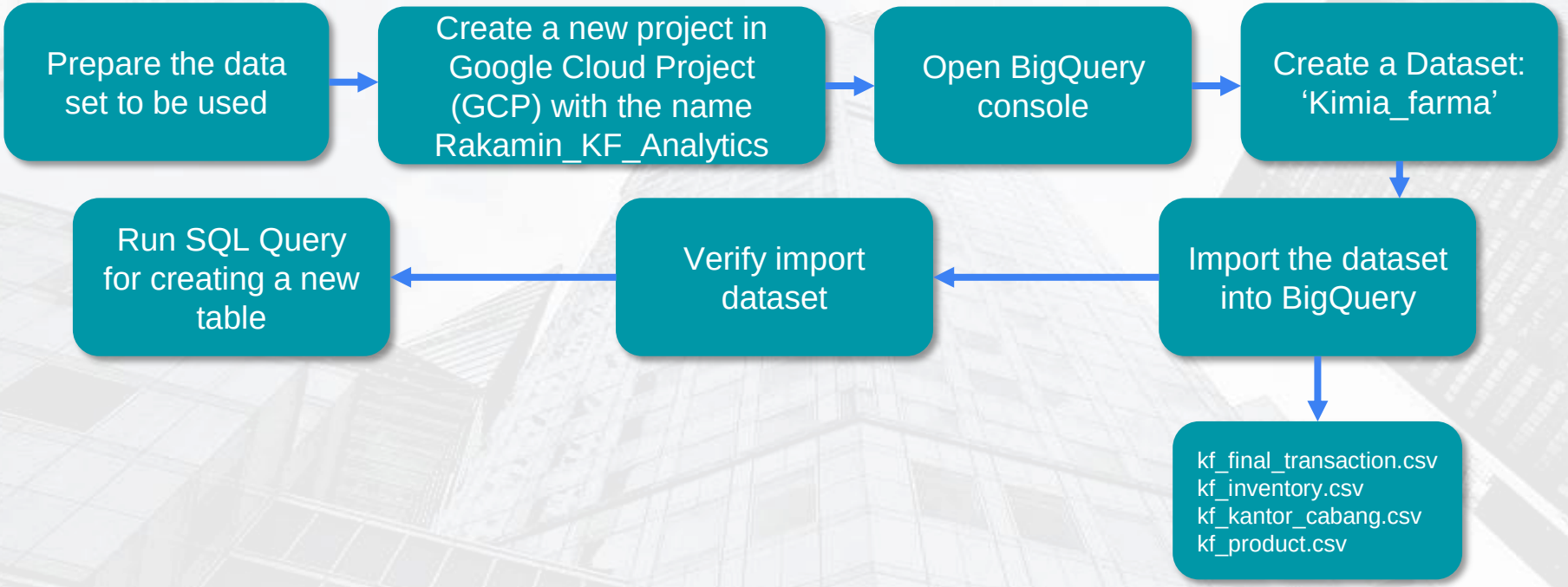
1. Importing Dataset to BigQuery



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2. BigQuery Sintax

This SQL syntax serves to create a new table named analytics_table in kimia_farma database. The new table is populated with data selected from existing tables such as kf_final_transaction, kf_inventory, kf_kantor_cabang, and kf_product.

variables Profits_calculated be used as CTE (Common Table Expression) in this case CTE will make it easier to help make SQL queries easier to understand and can help to reduce code repetition

```
5 -- Membuat Tabel Analisis
6 CREATE TABLE kimia_farma.analytics_table AS (
7     WITH profits_calculated AS (
```

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2. BigQuery Sintax

This SELECT statement fetches data from the specified tables (kf_final_transaction, kf_kantor_cabang, and kf_product).

```
 8       SELECT
 9       ft.transaction_id,
10       ft.date,
11       ft.branch_id,
12       kc.branch_name,
13       kc.kota,
14       kc.provinsi,
15       kc.rating AS rating_cabang,
16       ft.customer_name,
17       ft.product_id,
18       pr.product_name,
19       pr.price AS actual_price,
20       ft.discount_percentage,
```

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2. BigQuery Sintax

The sql query below serves to calculate the percentage of profit earned (converted into the presentase_gross_laba attribute) and calculate the price after obtaining a discount (converted into the nett_sales attribute)

```
22      -- Menghitung Persentase Laba yang Diperoleh
23      CASE
24        WHEN pr.price ⩽ 50000 THEN 0.10
25        WHEN pr.price ⩽ 100000 THEN 0.15
26        WHEN pr.price ⩽ 300000 THEN 0.20
27        WHEN pr.price ⩽ 500000 THEN 0.25
28        ELSE 0.30
29      END AS persentase_gross_laba,
30
31      -- Menghitung Harga Setelah Memperoleh Diskon
32      (pr.price - (pr.price * ft.discount_percentage)) AS nett_sales,
```

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2. BigQuery Sintax

The sql query below serves to calculate the profit obtained (converted into nett_profit attribute) and the addition of the rating attribute which is converted into rating_transaksi

```
34        -- Menghitung Keuntungan yang Diperoleh
35        (pr.price * (1 - ft.discount_percentage)) *
36        CASE
37          WHEN pr.price ⩽ 50000 THEN 0.10
38          WHEN pr.price ⩽ 100000 THEN 0.15
39          WHEN pr.price ⩽ 300000 THEN 0.20
40          WHEN pr.price ⩽ 500000 THEN 0.25
41          ELSE 0.30
42          END AS nett_profit,
43          ft.rating AS rating_transaksi
```

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2. BigQuery Sintax

This section specifies the tables to join (kf_final_transaction, kf_kantor_cabang, and kf_product) and the conditions for joining them. It joins kf_final_transaction with kf_kantor_cabang in branch_id and kf_final_transaction with kf_product in product_id. Then retrieve all columns from profit_calculated and retrieve all table columns from analytics_table

```
        FROM
        kimia_farma.kf_final_transaction AS ft
        LEFT JOIN
        kimia_farma.kf_kantor_cabang AS kc ON ft.branch_id = kc.branch_id
        LEFT JOIN
        kimia_farma.kf_product AS pr ON ft.product_id = pr.product_id
    )
    SELECT *
    FROM profits_calculated
);

SELECT *
FROM kimia_farma.analytics_table;
```

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3. Tabel Analisa

New Table Preview

analytics_table

QUERY SHARE COPY SNAPSHOT DELETE EXPORT REFRESH

SCHEMA DETAILS PREVIEW LINEAGE DATA PROFILE DATA QUALITY

Row	transaction_id	date	branch_id	branch_name	kota	provinsi	rating_cabang
1	TRX5954189	2023-02-17	41131	Kimia Farma - Apotek	Yogyakarta	DI Yogyakarta	4.8
2	TRX1054883	2022-05-01	60481	Kimia Farma - Apotek	Pekanbaru	Riau	4.1
3	TRX2484597	2021-05-13	96462	Kimia Farma - Apotek	Semarang	Jawa Tengah	4.1
4	TRX9654415	2021-01-18	12406	Kimia Farma - Apotek	Bitung	Sulawesi Utara	4.2
5	TRX2175935	2020-11-05	69761	Kimia Farma - Apotek	Subang	Jawa Barat	4.9
6	TRX4861015	2021-11-08	24277	Kimia Farma - Apotek	Lhokseumawe	Aceh	4.2
7	TRX3912645	2020-07-18	47175	Kimia Farma - Apotek	Bekasi	Jawa Barat	4.9
8	TRX1757196	2020-05-21	24913	Kimia Farma - Apotek	Bekasi	Jawa Barat	4.2
9	TRX3492865	2022-05-08	48130	Kimia Farma - Apotek	Tasikmalaya	Jawa Barat	4.7
10	TRX9861820	2020-04-24	73804	Kimia Farma - Apotek	Kendari	Sulawesi Tenggara	4.3

analytics_table

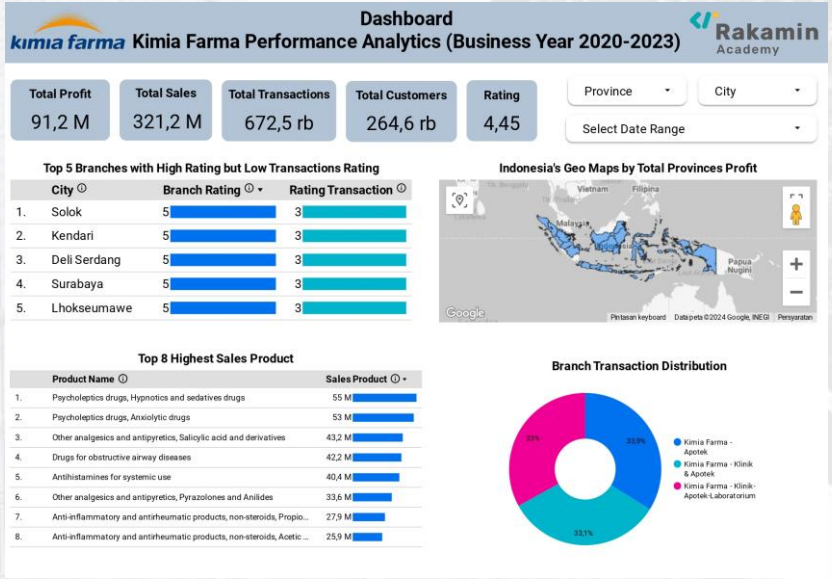
QUERY SHARE COPY SNAPSHOT DELETE EXPORT REFRESH

SCHEMA DETAILS PREVIEW LINEAGE DATA PROFILE DATA QUALITY

Row	customer_name	product_id	product_name	actual_price	discount_percen	persentase_gros	nett_sales	nett_profit
1	Jack Hale	KF601	Psycholeptics drugs, Anxiolytic...	512000	0.04	0.3	491520.0	147456.0
2	Andrew Clark	KF601	Psycholeptics drugs, Anxiolytic...	512000	0.04	0.3	491520.0	147456.0
3	Jesus Gibson	KF601	Psycholeptics drugs, Anxiolytic...	512000	0.04	0.3	491520.0	147456.0
4	Jonathan Herman	KF601	Psycholeptics drugs, Anxiolytic...	512000	0.04	0.3	491520.0	147456.0
5	Rachel Perez DVM	KF601	Psycholeptics drugs, Anxiolytic...	512000	0.04	0.3	491520.0	147456.0
6	Nicole Wilson	KF601	Psycholeptics drugs, Anxiolytic...	512000	0.04	0.3	491520.0	147456.0
7	Jasmine Jackson	KF601	Psycholeptics drugs, Anxiolytic...	512000	0.04	0.3	491520.0	147456.0
8	Richard Taylor	KF601	Psycholeptics drugs, Anxiolytic...	512000	0.04	0.3	491520.0	147456.0
9	Bryan Moreno	KF601	Psycholeptics drugs, Anxiolytic...	512000	0.04	0.3	491520.0	147456.0
10	George Peck	KF601	Psycholeptics drugs, Anxiolytic...	512000	0.04	0.3	491520.0	147456.0

4. Dashboard Performance Analytics

Link: https://lookerstudio.google.com/reporting/82957fd3-208f-4703-8c5f-e0fc70d97c95



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Thank You