2023

Portofolio.

By. **Ivan Yudha**

Ivan Yudha

Introduction.

2023

Hi! I'm **Ivan Yudha**

A Data Analyst and Business Analyst enthusiast. Love to learn new things and challenge myself.

Skill.

Data Analytics Tableau SQL

Python Excel Business Intelligence

Looker Power BI

Interest.

Along with Analyst, I enjoy working out, traveling, and reading. I also enjoy watching movies.

Education.

2017 - 2020

Dian Nuswantoro University

Diploma
Informatics Engineering

Experience.

Software Engineer
BPBD Provinsi Jawa Tengah

Data Engineer Internship
Kalbe Nutritionals

Business Intelligence Analyst Internship
Bank Muamalat

Big Data Analytics Internship
Kimia Farma

2023

2023

My Project.

Data Engineer
Business Intelligence Analyst
Big Data Analytics
Analyzing eCommerce Business
Performance with SQL

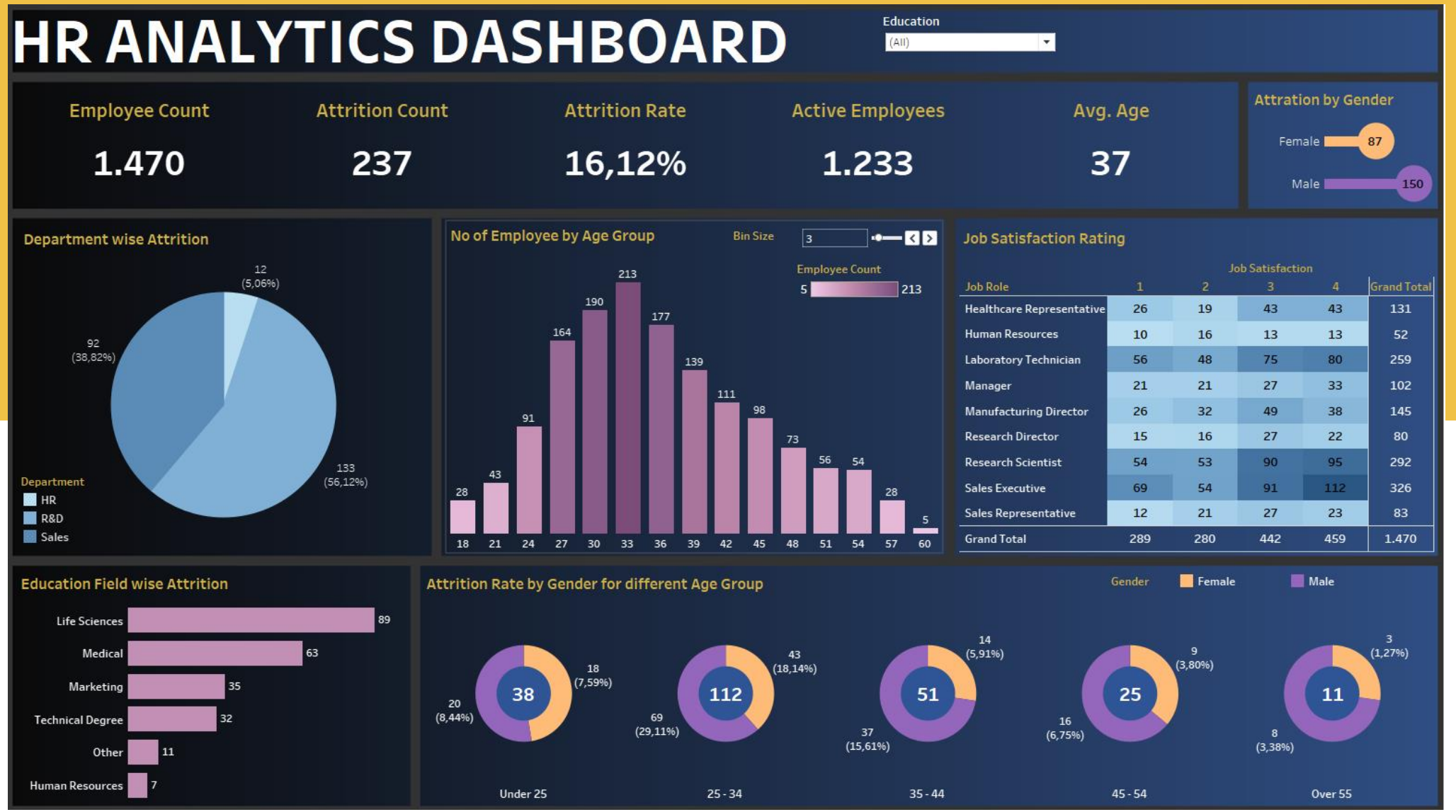
My Dashboard.

Dashboard HR
Sales Salycil Dashboard
Sales Dashboard

Ivan Yudha

1. HR ANALYTICS DASHBOARD

2023



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Insight.

Highest Attrition in the R&D Department: The fact that the highest attrition rate occurs in the R&D Department remains a major concern. Some insights that can be derived from this are:

An in-depth analysis is needed to understand why attrition is high in the R&D Department. There may be issues in management, a high workload, or a lack of career development that could be contributing factors.

Specific improvement measures are required to reduce attrition in the R&D Department, such as enhancing management, providing training, or improving compensation and incentives.

Ivan Yudha

2. DATA ENGINEER

at Kalbe Nutritionals

2023

Create a shell/bash script

- To check whether directory exists inside a given path.
- Create a crontab syntax to run the script at **07:00** AM Daily

```
#!/bin/bash

path="/hdfs/data/data1"
name_of_directory="data1"

filename_excel="daily_market_price.xlsx"
source_dir="/local/data/market"
target_dir="$path/$name_of_directory"

if [ -d "$target_dir" ]; then
        echo "There is $name_of_directory Directory Exist!"

        if [ -f "$source_dir/$filename_excel" ]; then
                cp "$source_dir/$filename_excel" "$target_dir/"
                echo "File $filename_excel copied to $target_dir"

                log_file="$target_dir/log.txt"
                echo "File Moved Successfully" > "$log_file"
                echo "Log Created at: $log_file"
        else
```

Complete below Syntax {Highlighted Sentence} to insert data from Python to MySQL.

```
#Melakukan import mysql connector
import mysql.connector
#Melakukan percobaan koneksi
conn = mysql.connector.connect(user='username', password='password',
                               host='localhost', database='database_name')
#Membuat object cursor sebagai penanda
cursor = conn.cursor()
#Deklarasi SQL Query untuk memasukkan record ke DB (KARYAWAN)
insert_sql = ("INSERT INTO KARYAWAN (FIRST_NAME, LAST_NAME, AGE, SEX, INCOME)"
              "VALUES (%s, %s, %s, %s, %s)" )
values = ('John', 'Doe', 25, 'M', 5000)
try:
    #Eksekusi SQL Command
    cursor.execute(insert_sql, values)
    #Melakukan perubahan (commit) pada DB
    conn.commit()
except:
    #Roll Back apabila ada issue
    conn.rollback()
```

3. BUSINESS INTELLIGENCE ANALYST

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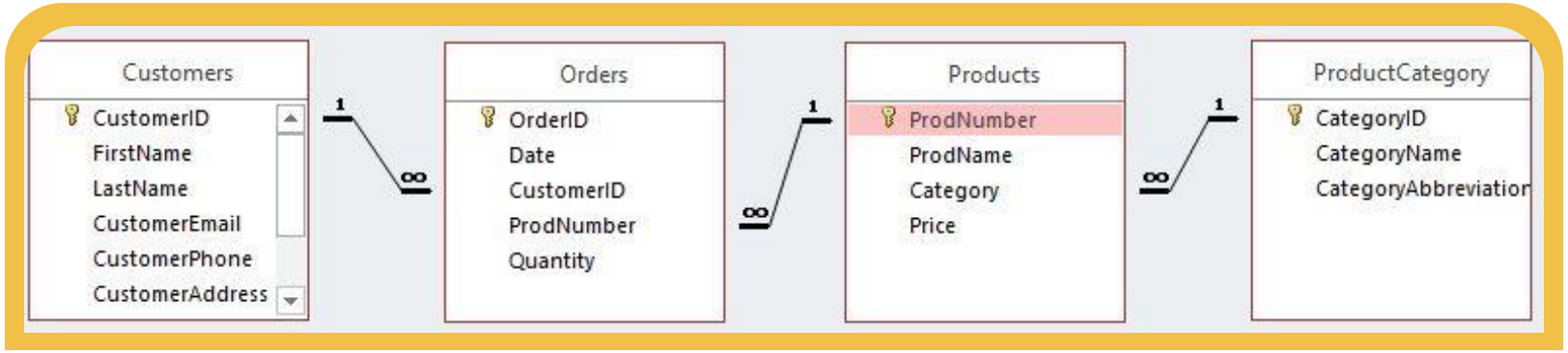
at Bank Muamalat

Relationship Table

When you want to combine several tables into 1, need to determine the relationship in 1 table withother tables.



DIGITAL USER CHURN DASHBOARD

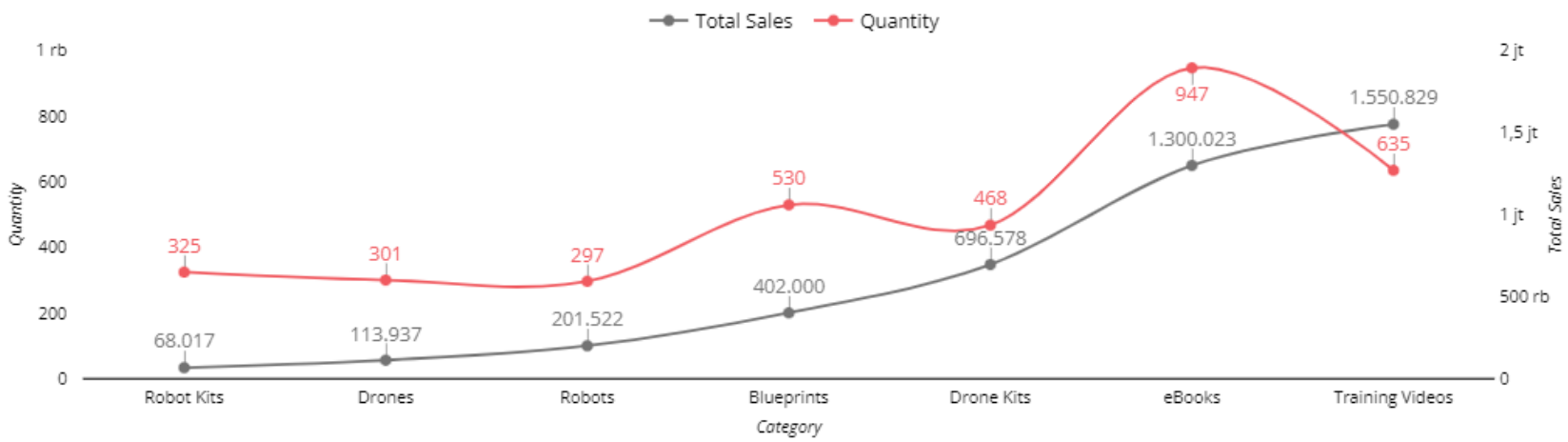
Category

City

Total Sales
4.332.906

2023

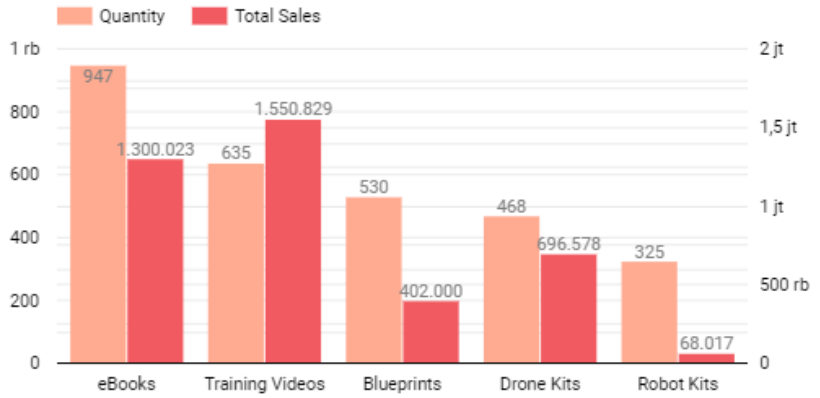
Sales & Quantity by Category Product



Sales & Quantity by City

City	Quantity	Total Sales
Washington	92	171.917
Houston	75	58.387
Atlanta	69	74.159
El Paso	59	94.162
San Diego	51	60.360
Chicago	48	65.775
San Antonio	48	61.309
Oklahoma City	47	33.064
Springfield	47	38.873

Top 5 Sales & Quantity by Category Product



Here are some proposed ways:

- **Maximizing Customer Email Information**: Utilize customer email information as a method to maintain communication.
- **Segmenting Customers**: Segment customers based on their total purchases during a specific time frame and provide attractive offers to each customer segment.
- **Maximizing Cross-Selling and Upselling**: Implement cross-selling and upselling strategies. For cross-selling, you can use the Association Rule technique with the Apriori algorithm to recommend other products when a customer purchases a specific item.

As a **BI Analyst**, in addition to analyzing and presenting past events, it is also expected to maximize existing data sources to provide recommendations or proposals for business decisions.

Ivan Yudha

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4. BIG DATA ANALYTICS

at Kimia Farma

Design Datamart

Of the 3 tables available (sales, customers, and goods) I assume these 3 tables are indata lake. To create a datamart, there are 2 steps:

1. Table base

- The base table is a table resulting from merging 3 tables with sales_id granularityas Primary Key (i.e. a combination of invoice_id and item_id)
- The number of rows of data in the base table is the same as the total in the sales table
- The base tables are stored in the data warehouse2. Aggregate tableA. Aggregate tables are derivatives of base tables on which data is collected baseddate, customer_id and invoice_idB. Aggregate tables are stored in the datamart

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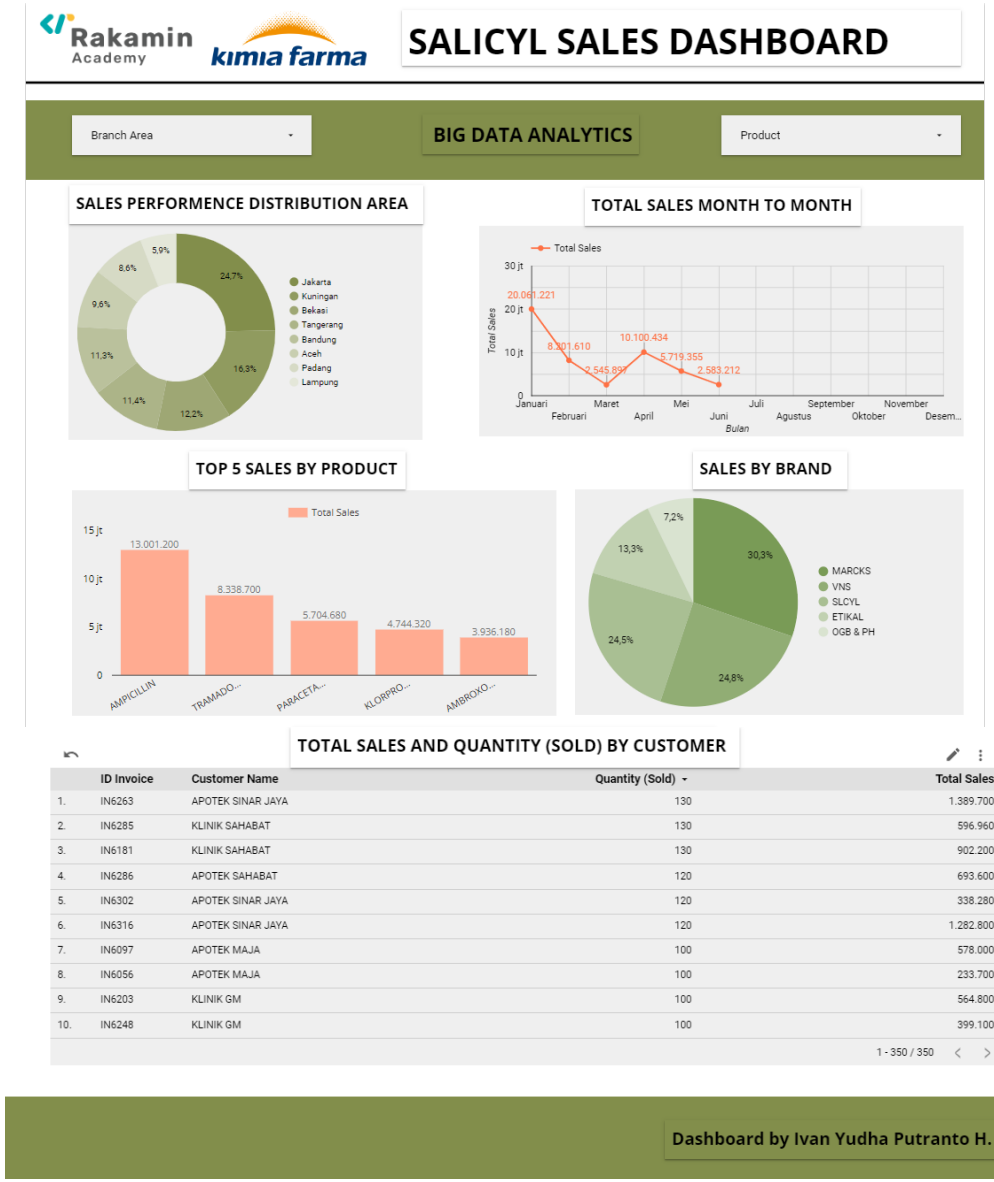
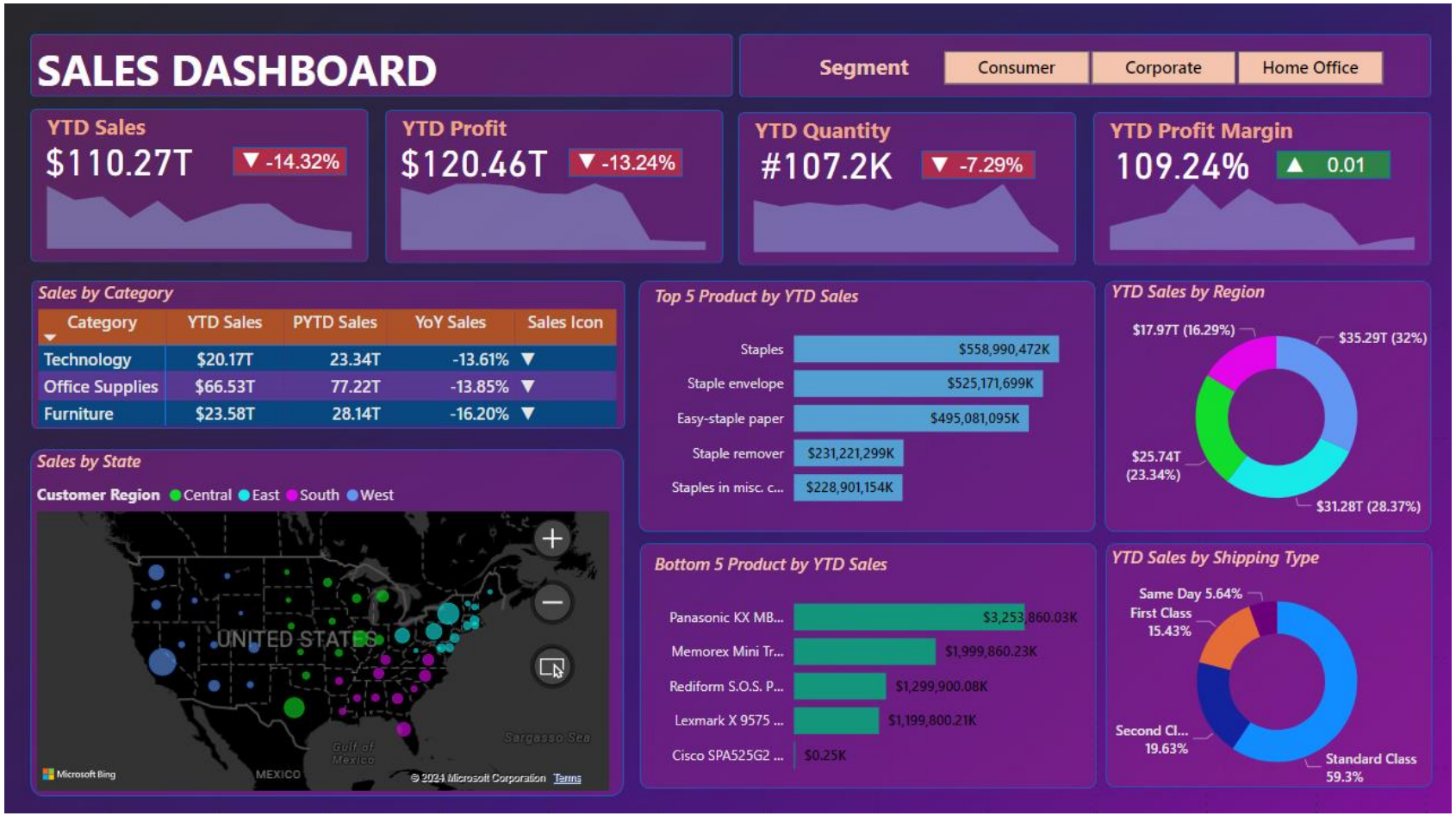
SALICYL SALES DASHBOARD



SALES DASHBOARD



Insight

• **Sales are down year-over-year (YoY) across all segments and categories.** This could be a cause for concern, especially since the decline is sizeable (around 14%). It would be helpful to see data from previous years to understand if this is a seasonal trend or part of a larger issue.

• **Consumer segment sales are down the least YoY (-7.29%) while Home Office is down the most (-16.20%).** This might indicate a shift in consumer buying habits, with less focus on work-from-home essentials.

• **Technology is the only category with a positive YoY sales increase (0.01%).** This could be due to a number of factors, such as the release of new tech products or increased demand for certain tech items.

• **Staples are the top-selling product by YTD sales, followed by Office Supplies and Furniture.** This suggests that these are core product categories for the business. However, it's important to note that sales for all these categories are down YoY.

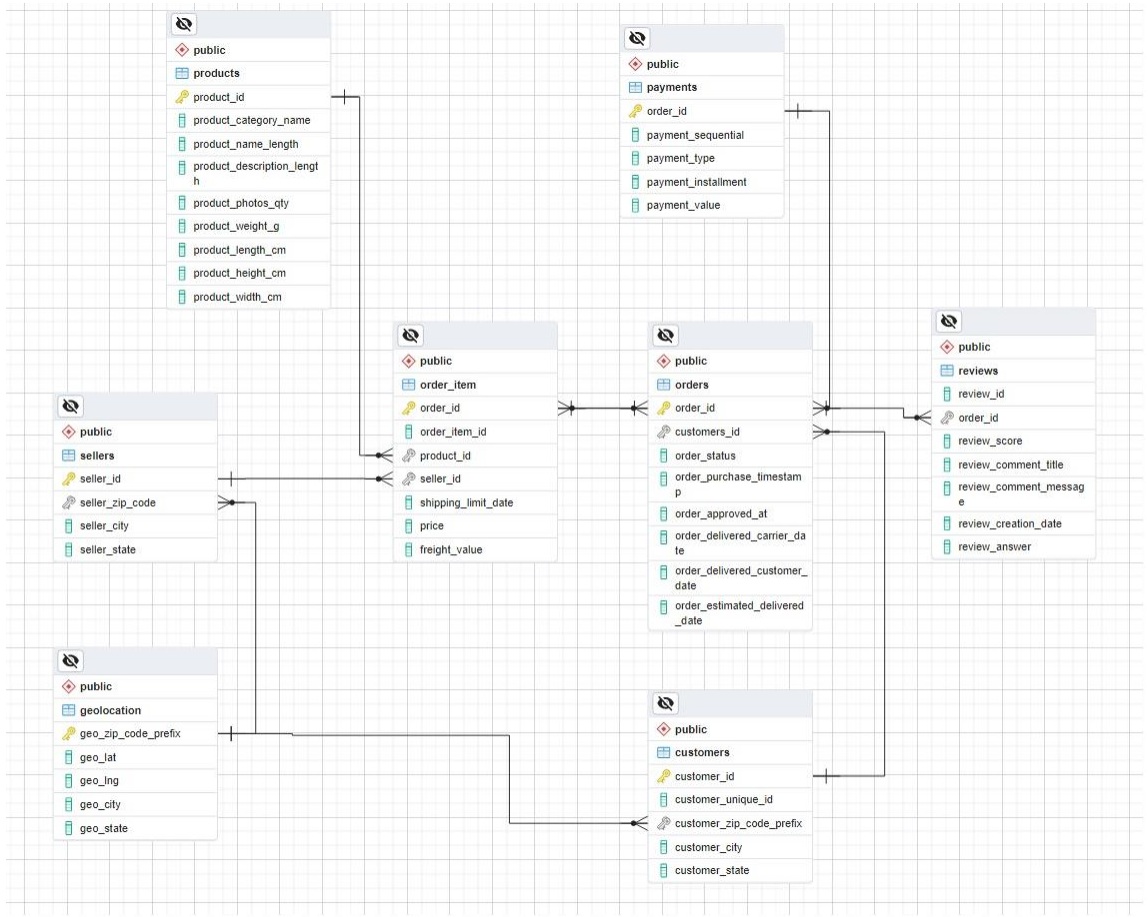
• **The majority of sales are from the Central East South region (64.61%), followed by the West (28.37%).** It would be interesting to see this data compared to previous years to see if there are any regional sales trends.

• **Standard Class is the most popular shipping type, accounting for nearly 60% of sales.**

Analyzing eCommerce Business Performance with SQL

"In a company, measuring business performance is crucial to track, monitor, and evaluate the success or failure of various business processes. Therefore, this paper will analyze the business performance of an eCommerce company, taking into account several business metrics including customer growth, product quality, and payment methods."

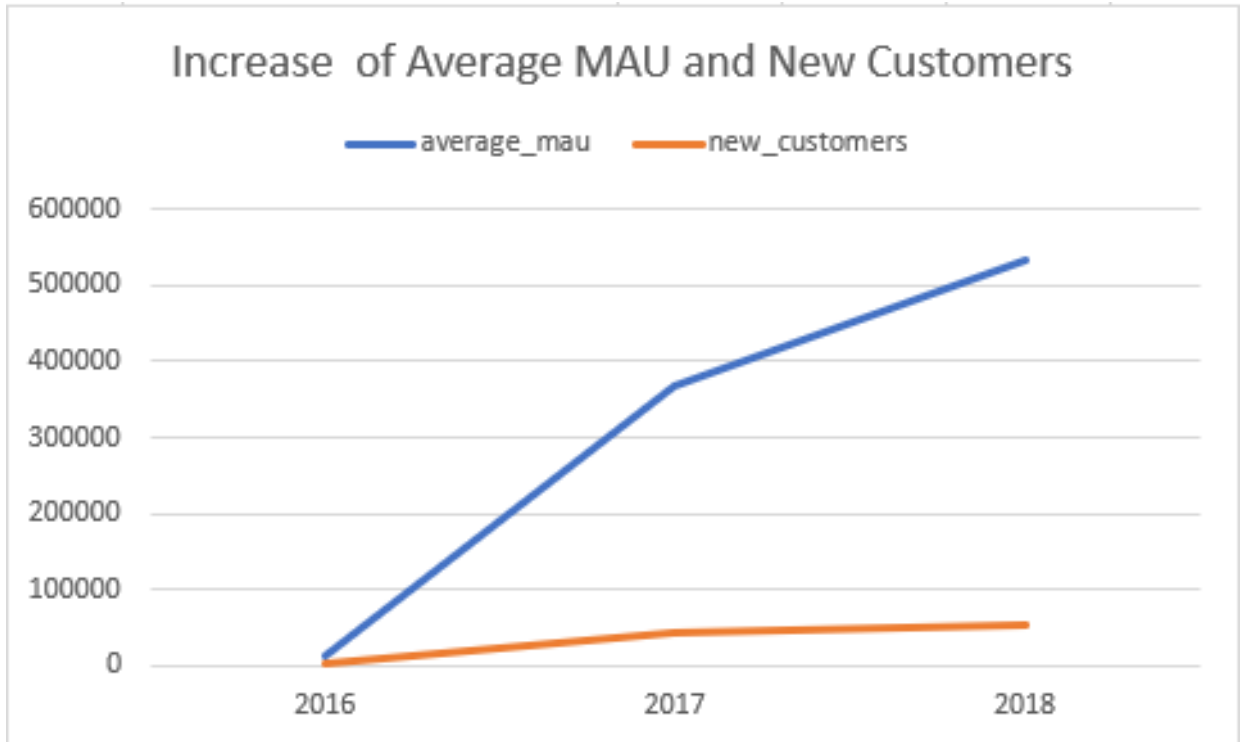
ERD (Entity Realtionship Diagram)



	year double precision	average_mau numeric	new_customers bigint	repeating_customers bigint	avg_orders_per_customers numeric
1	2016	108.67	326	3	1.009
2	2017	3694.83	43708	1256	1.032
3	2018	5338.20	52062	1167	1.024

Query selengkapnya dapat dilihat disini

Analyst/Insight



Starting from transaction data in September 2016, the analysis reveals a significant difference between the values in 2016 and subsequent years, indicating striking dynamics. It is evident that monthly active user (MAU) activity and the number of new customers experienced a surge, providing an overview of the positive changes that occurred during that period.

Analyst/Insight

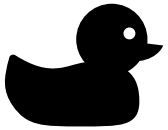
	year double precision	average_mau numeric	new_customers bigint	repeating_customers bigint	avg_orders_per_customers numeric
1	2016	108.67	326	3	1.009
2	2017	3694.83	43708	1256	1.032
3	2018	5338.20	52062	1167	1.024

	2016	2017	2018
Top Product	Furniture Decor	Health Beauty	Health Beauty
Revenue	$5225.15	$493735.30	$773382.99

Analyst

From the above analysis, it is evident that each year, the product categories contributing the most to the company's revenue undergo dynamic changes. From an overall perspective, the company's revenue also demonstrates consistent growth every year.

Analyst/Insight

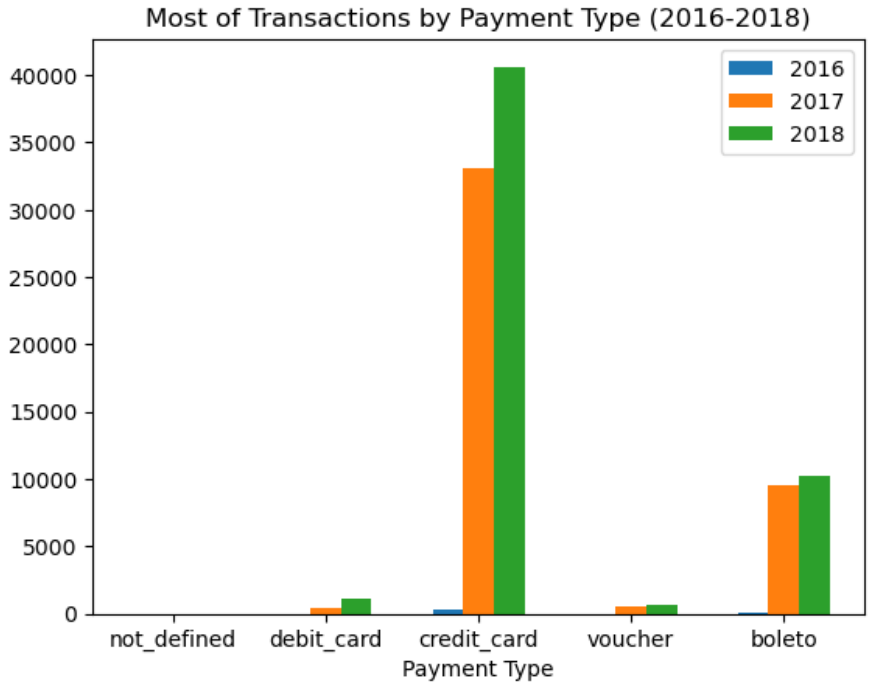
	2016	2017	2018
Most Canceled	 Toys	Sports Leisure	Health Beauty
Total Cancel Order per Year	26	265	334

Analyst

From the analysis of changes in product categories that experience the most cancellations each year, it appears that this pattern is dynamic and constantly evolving. An interesting fact that grabs attention is that the health & beauty product category, which on one hand contributes the most to revenue, also became the category with the highest number of cancellations in 2018. This could be attributed to the dominance of the health & beauty category in total transactions for that year. Further analysis could be an interesting step to confirm these findings.

Analyst/Insight

	payment_type character varying (250)	year_2016 numeric	year_2017 numeric	year_2018 numeric	pc_2017_2018 numeric
1	not_defined	0	0	3	[null]
2	debit_card	2	422	1102	1.61
3	credit_card	251	33095	40626	0.23
4	voucher	1	549	644	0.17
5	boleto	63	9508	10213	0.07



Analyst

Credit cards remain the primary choice for customers. Interestingly, the use of debit cards increased by over 100% from 2017 to 2018, while the use of vouchers decreased. This could be due to promotions with debit cards and a lack of promotion with vouchers. For further information, confirmation from the Marketing or Business Development team would be beneficial.

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Thank You.