Rakamin Academy X KALBE Nutritionals

Machine Learning Project

Kalbe Nutritionals Data Scientist

Presented by
Gilang Muhamad Rizky

Gilang Muhamad Rizky

About You

- Freshgraduate from Telkom University
- Data Enthusiast
- Aspiring Data analyst & Data Science

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Experience & Project

- Research Assistant RC HUMIC Telkom University (Research about detecting Arrhythmia using machine learning)
- Make paper that have been accepted and presented in ICOICT 2023 entitled “Detection of Myocardial Infarction in Coronary Artery Disease Patients Based on Phonocardiogram Signal Using Ensemble Learning”

Case Study

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Inventory Team

The goal :

- Make a forecast to estimated quantity of products sold so that the inventory team can maintain sufficient daily stock levels.

Marketing Team

The goal :

- Create customer segmentation clusters that serve to determine the appropriate sales treatment and promotions based on their respective clusters.

EDA

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case_study_customer 1

```
select "Marital Status", avg(age) as rata_rata_umur from ca
```

	Marital Status	rata_rata_umur
1	Married	43.0382352941
2	Single	29.3846153846

	jenis_kelamin	rata_rata_umur
1	Wanita	40.326446281
2	Pria	39.1414634146

combined_table_transaction_product 1

```
select "Product Name", sum(totalamount) as total_amoun
```

	Product Name	total_amount
1	Cheese Stick	27,615,000
2	Choco Bar	21,190,400
3	Coffee Candy	19,711,800
4	Yoghurt	19,630,000
5	Oat	15,440,000
6	Crackers	13,680,000
7	Potato Chip	13,104,000
8	Thai Tea	11,982,600
9	Cashew	11,286,000
10	Ginger Candy	8,403,200

combined_table_transaction_product 1

```
select "Product Name", sum(qty) as total_qty from combi
```

	Product Name	total_qty
1	Thai Tea	2,853
2	Ginger Candy	2,626
3	Choco Bar	2,408
4	Coffee Candy	2,097
5	Yoghurt	1,963
6	Cheese Stick	1,841
7	Crackers	1,824
8	Potato Chip	1,092
9	Oat	965
10	Cashew	627

combined_table_store_transaction 1

```
select storename, sum(qty) as total from combine
```

	storename	total
1	Lingga	2,777
2	Sinar Harapan	2,588
3	Prestasi Utama	1,395
4	Prima Kota	1,358
5	Buana	1,320
6	Prima Tendean	1,310
7	Prima Kelapa Dua	1,296
8	Harapan Baru	1,286
9	Bonafid	1,283
10	Priangan	1,239
11	Gita Ginara	1,236
12	Buana Indah	1,208

combined_table_store_transaction 1

```
select storename, sum(totalamount) as total_amount fro
```

	storename	total_amount
1	Lingga	25,294,100
2	Sinar Harapan	21,882,600
3	Prestasi Utama	12,285,200
4	Prima Kelapa Dua	12,136,300
5	Prima Tendean	11,895,500
6	Bonafid	11,595,600
7	Prima Kota	11,551,100
8	Buana	11,332,000
9	Harapan Baru	11,329,500
10	Gita Ginara	11,116,100
11	Priangan	10,995,100
12	Buana Indah	10,629,900

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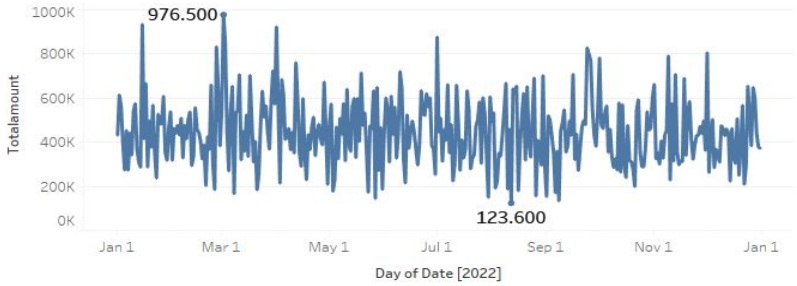
Total Sales

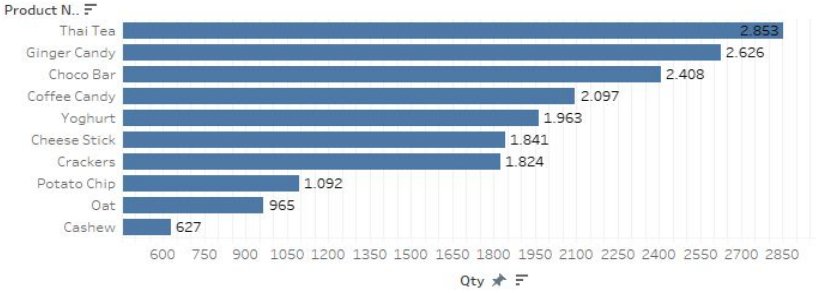
162.043.000

Total Quantity Sold Each Month

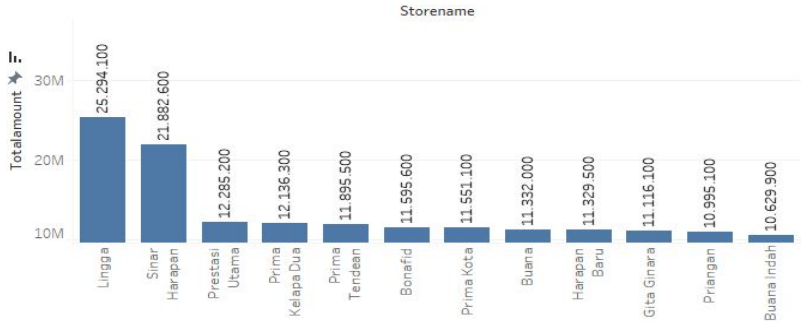
Total Sales Each Day on 2022



Total Product Sold by Quantity



Total Sales of Each Store



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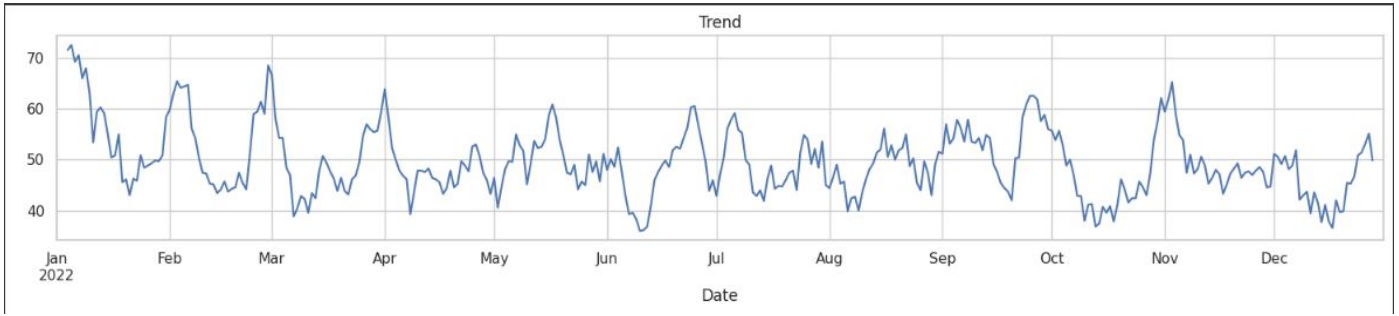
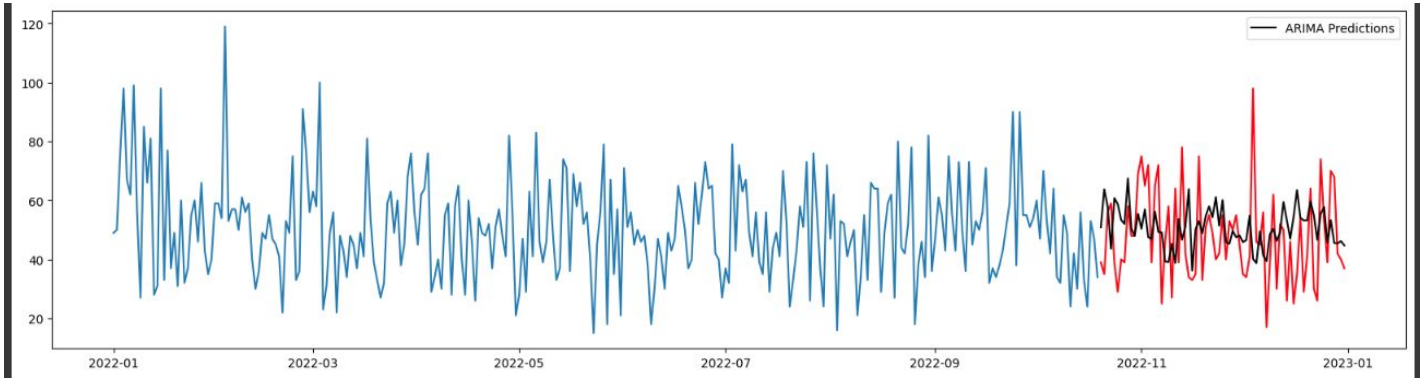
Using ARIMA Model to Forecasting product quantity





Clustering

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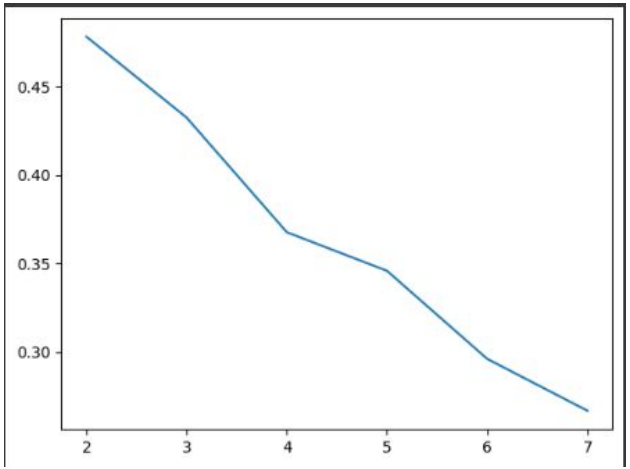
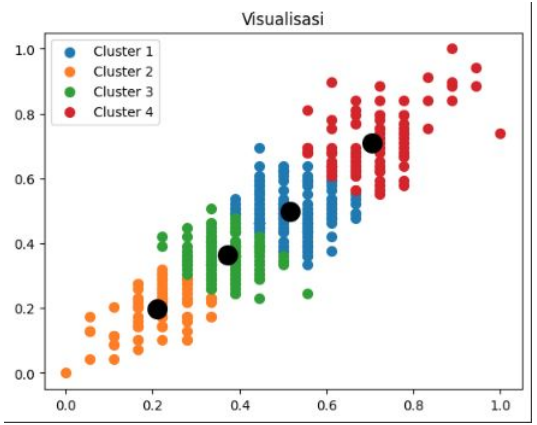
Using KMeans to build Cluster

cluster_label	TransactionID	Qty	TotalAmount
0	120	5586	49363700
1	90	2189	18611300
2	157	5729	49981100
3	77	4621	42612600





Github : https://github.com/gilangrizky67
Video Presentation :
https://drive.google.com/drive/folders/1rjgBcR2ot03l4KInafQCtRKzehZMXXIm?usp=sharing
Tableau Public : https://public.tableau.com/app/profile/gilang.muhamad.rizky

Thank You