DATA ANALYST | INDUSTRIAL ENGINEERING

Portfolio

WAHYU WIBOWO PUTRO

2024

Hello..

IM WAHYU WIBOWO PUTRO

I am a graduate of Master's Degree in Industrial Engineering (Data engineering and quality). A data analyst with more than 1.5 years of work experience in conducting data analysis for various company needs in the business sector and Drove the growth of a company by increasing project return value by 15%. Familiar with operating SQL, Python, Tableau

EXPERIENCE

QUALITY ASSURANCE TESTER

FRESH FACTORY

September 2023 - January 2024

- I ensure the reliability and functionality of systems and processes.
- Execute a comprehensive test plan, identify defects.
- Collaborating with cross-functional teams con rms my commitment to producing high-quality products.
- Together with FE, BE and PM collaborate to discuss improvising better ows or features for users.

DATA ANALYST

PETROLINDO MITRA ENERGI

September 2020 - May 2022

- Understand and Analyze Transactional (Order Related), Behavioral (Event Tracking, Client Activity) and Demographic data.
- Create visually engaging and informative reports, dashboards, and presentations to communicate ndings and insights to stakeholders.
- Perform in-depth data analysis to identify trends, patterns and opportunities for optimization.
- Perform data quality checks to ensure data accuracy

SKILLS

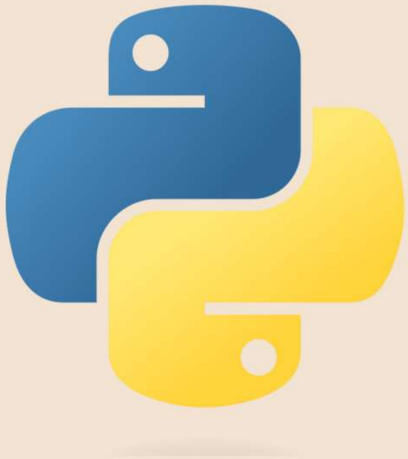
Hardskills

- Data Analyst
- Data Visualization
- Data Cleaning
- Statistic

Softskills

- Communication
- Team Work
- Leadership
- Critical Thinking
- Attention to detail

TOOLS



Python

SQL

Tableau

Excel

CERTIFICATE OF ACHIEVEMENT

SAILENDRA INSTITUTE
CERTIFICATE OF COMPLETION

THIS IS TO CERTIFY THAT:

Wahyu Wibowo Putro

HAS COMPLETED:

Data Analysis with Tableau & SQL Intensive Mini Bootcamp

WHICH HELD ON:

January 29th-30th, and February 5th-6th, 2022

Nadira Khalida K., MBA
SAINS Principal

Cert.No : 007/MB/DAMB/II/2022

Data Analysis with Tableau & SQL Intiensive Mini Bootcamp

#DQLABDVIZ2FLKNLG

CERTIFICATE
OF COMPLETION

This Certificate is Proudly Presented to

Wahyu W.P.

Has Completed in

Data Analyst Project: Business Decision Research

14 Feb 2023

Data Analysis Project :
Business Decision Research

Google

COURSE CERTIFICATE

WAHYU WIBOWO PUTRO

has successfully completed

Process Data from Dirty to Clean

an online non-credit course authorized by Google and offered through Coursera

coursera

Course Coursera :
Process Data from Dirty to Clean

Google

COURSE CERTIFICATE

WAHYU WIBOWO PUTRO

has successfully completed

Ask Questions to Make Data-Driven Decisions

an online non-credit course authorized by Google and offered through Coursera

coursera

Course Coursera :
Ask Questions to Make Data-Driven Decision

Google

COURSE CERTIFICATE

WAHYU WIBOWO PUTRO

has successfully completed

Data Analysis with R Programming

an online non-credit course authorized by Google and offered through Coursera

coursera

Course Coursera :
Data Analysis with R Programming

Google

COURSE CERTIFICATE

WAHYU WIBOWO PUTRO

has successfully completed

Prepare Data for Exploration

an online non-credit course authorized by Google and offered through Coursera

coursera

Course Coursera :
Prepare Data for Exploration

CERTIFICATE OF ACHIEVEMENT

Course Coursera :
Share Data Through the Art of Visualization

Course Coursera :
Foundations : Data, Data, Everywhere

Course Coursera :
Analyze Data to Answer Questions

PORTFOLIO

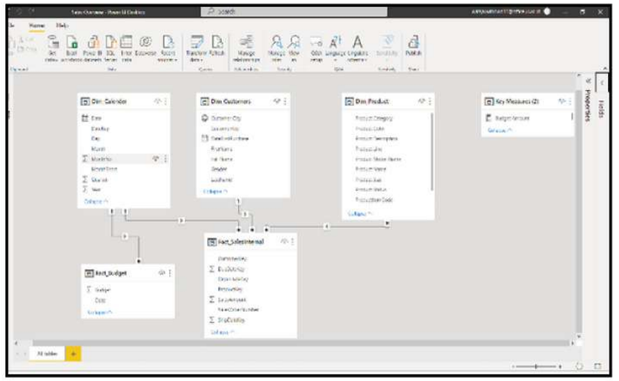
Sales Management

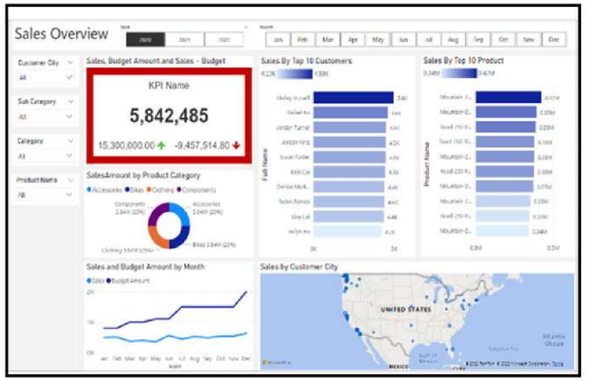
Project Summary

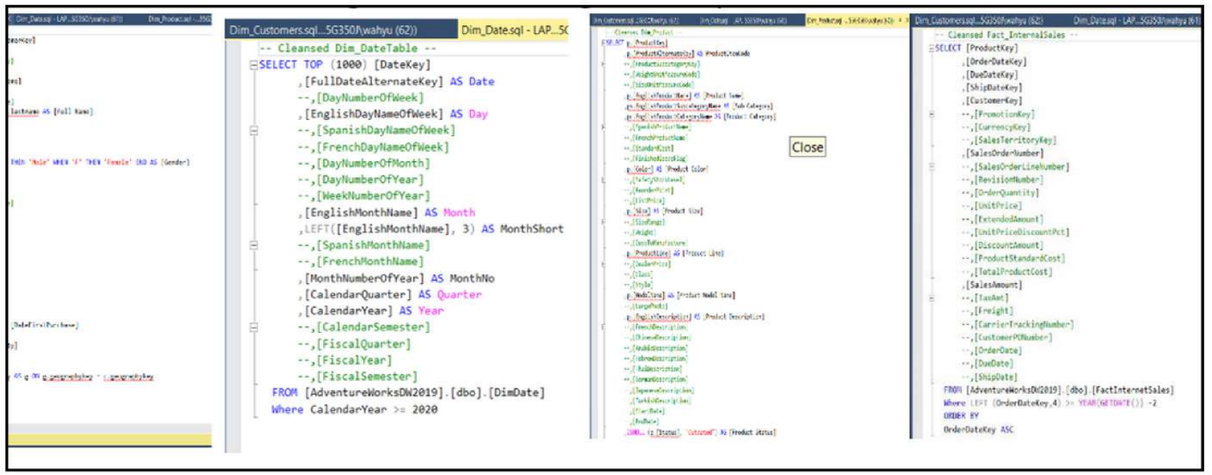
- In this project I carried out analysis in sales which will later be used by sales managers for strategy making purposes.
- The aim is to see business insights which can later be used to make plans to increase sales.
- In processing data, SQL is used to filter whatever data is needed and also clean data that will not be used, making it easier to process the data.
- After carrying out the analysis, several conclusions were obtained

1. Annual sales tend to be static in 2020 but there will be an increase in 2021 and 2022.
2. The budget issued in 2020 was more than the sales results, but in the following years there was a reversal between the budget and the sales results.

#	As a (role)	I want (request/demand)	So that I (user value)	Acceptance Criteria
1	Sales Manager	To get a dashboard overview of internet sales	Can follow better which customers and products sells the best	A Power BI dashboard which updates data once a day
2	Sales Representative	A detailed overview of internet sales per customers	Can follow up my customers that buys the most and who we can sell more to	A power BI dashboard which allows me to filter data for each customer
3	Sales Representative	A detailed overview of internet sales per products	Can follow up my products that sells the most	A power BI dashboard which allows me to filter data for each product
4	Sales Manager	A dashboard overview of internet sales	follow sales over time againts budget	A power BI dashboard with graphs and KPIs comparing againts budget





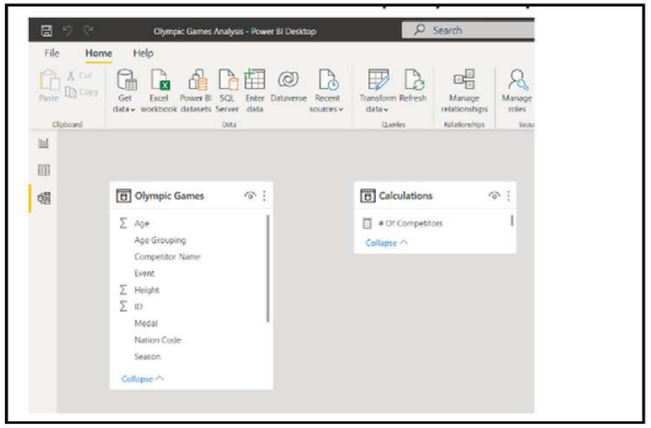


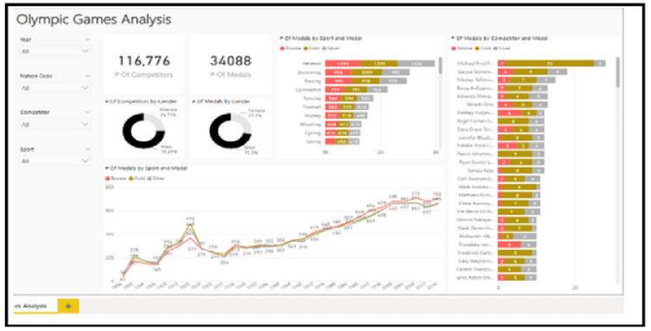
Olympic Games Analysis

Project Summary

- In this project I carry out analysis in sports to predict which country will have the greatest chance of getting the most medals.
- The aim is to see the potential of which countries have the greatest possibility of winning the Olympics next year, then what branches each country is championing.
- In processing data, SQL is used to filter whatever data is needed and also clean data that will not be used, making it easier to process the data.
- After carrying out the analysis, several conclusions were obtained

1. Every 4 years the total number of medals at the Olympics tends to increase, which means there are always new branches or additional medals in each sport.
2. There are several countries that tend to have increasing performance every year so that they become strong candidates to win the next Olympics.





Machine Learning

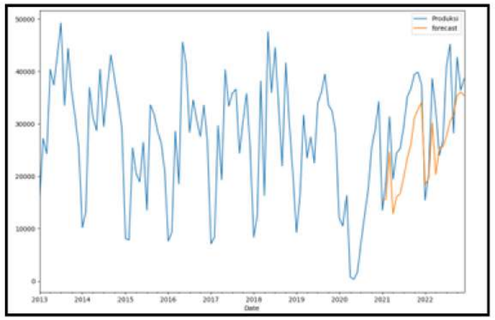
Project Summary

- In this project I aim to create machine learning about the production needed in the next few months using data from the past 10 years.
- The model was created with monthly data for the last 10 years to predict production for the next year every month.
- The sample data obtained was 120 months over the last 10 years.
- Existing data is used with a ratio of 80:20 where 20 is for training data and 80 is for test data.
- In the process, I used Python to create machine learning coding with 3 methods, namely SARIMA, SARIMAX, and Rolling SARIMA.
- After processing and modeling, the results of predictions for production for the next year (12 months) were found using 3 methods.
- To see which method is the best, we use the MAPE calculation function and look at the lowest MAPE value to become the best method.

```
## Ploting PACF & ACF
from statsmodels.graphics.tsaplots import plot_acf,plot_pacf
import statsmodels.api as sm

fig = plt.figure(figsize=(12,8))
ax1 = fig.add_subplot(211)
fig = sm.graphics.tsa.plot_acf(df['Seasonal First
Difference'].iloc[13:],lags=40,ax=ax1)
ax2 = fig.add_subplot(212)
fig = sm.graphics.tsa.plot_pacf(df['Seasonal First
Difference'].iloc[13:],lags=40,ax=ax2)


fig = plt.figure(figsize=(12,8))
ax1 = fig.add_subplot(211)
fig =
sm.graphics.tsa.plot_acf(df['Produksi'].iloc[13:],lags=40,ax=ax1)
ax2 = fig.add_subplot(212)
fig =
sm.graphics.tsa.plot_pacf(df['Produksi'].iloc[13:],lags=40,ax=ax2



## Pembagian Train & Test Data
from statsmodels.tsa.arima_model import ARIMA
print(df.shape)
train=df.iloc[:-24]
test=df.iloc[-24:]
print(train.shape,test.shape)




## Pemodelan SARIMA
model=sm.tsa.statespace.SARIMAX(train['Produksi'],order=(1, 1,
0),seasonal_order=(1,1,1,12))
results=model.fit()
results.summary()
df['forecast']=results.predict(start=96,end=120,dynamic=True)
df[['Produksi','forecast']].plot(figsize=(12,8))
```

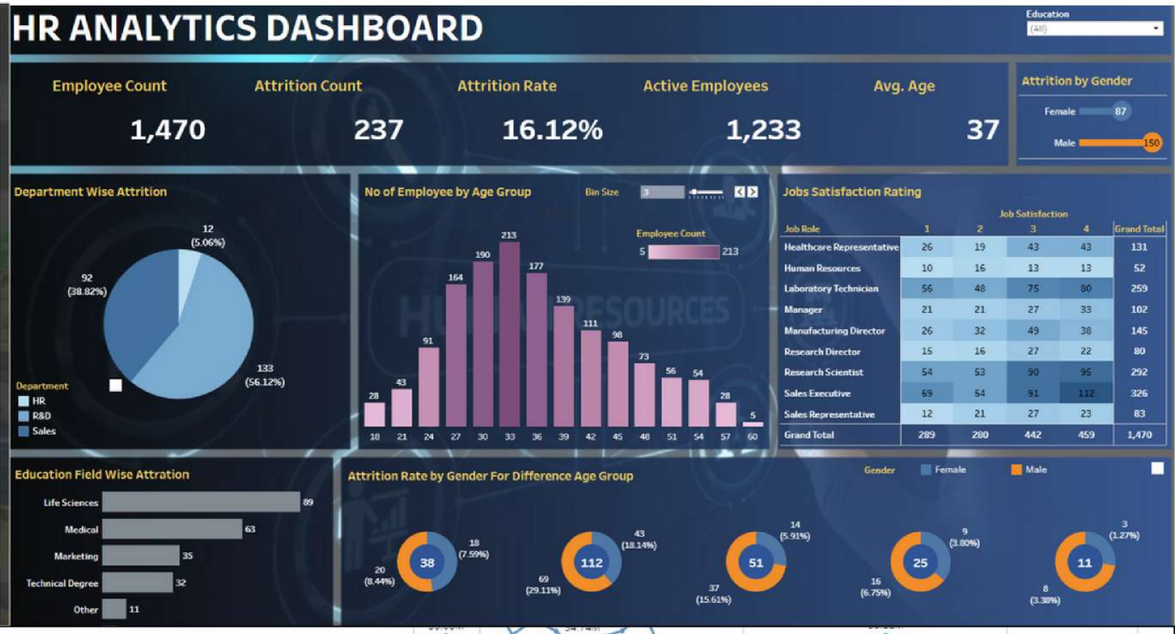
```
def MAPE(Y_actual,Y_Predicted):
    mape = np.mean(np.abs((Y_actual - Y_Predicted)/Y_actual))*100
    return mape


LR_MAPE= MAPE(test['Produksi'],prediction)
print("MAPE: ",LR_MAPE)
```

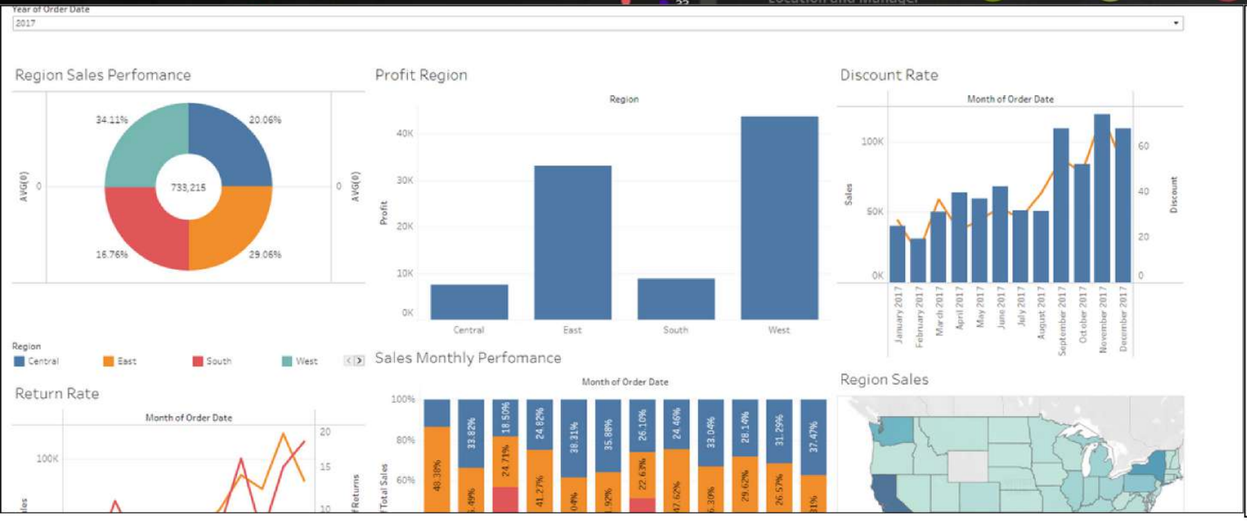
```
import numpy as np
import pandas as pd

import matplotlib.pyplot as plt
%matplotlib inline

## Import data
df=pd.read_csv('….csv')
df['Date']=pd.to_datetime(df['Date'])
df.set_index('Date',inplace=True)
df['Produksi'].plot()



## Pengujian ADF Test & Differencing
from statsmodels.tsa.stattools import adfuller
test_result=adfuller(df['Produksi'])
def adfuller_test(Produksi):
    result=adfuller(Produksi)
    labels = ['ADF Test Statistic','p-value','#Lags Used','Number
of Observations Used']
    for value,label in zip(result,labels):
        print(label+' : '+str(value) )
    if result[1] <= 0.05:
        print("strong evidence against the null hypothesis(Ho),
reject the null hypothesis. Data has no unit root and is
stationary")
    else:
        print("weak evidence against null hypothesis, time series
has a unit root, indicating it is non-stationary ")
adfuller_test(df['Produksi'])
df['Produksi First Difference'] = df['Produksi'] -
df['Produksi'].shift(1)

df['Produksi'].shift(1)
## Again test dickey fuller test
adfuller_test(df['Produksi First Difference'].dropna())
```

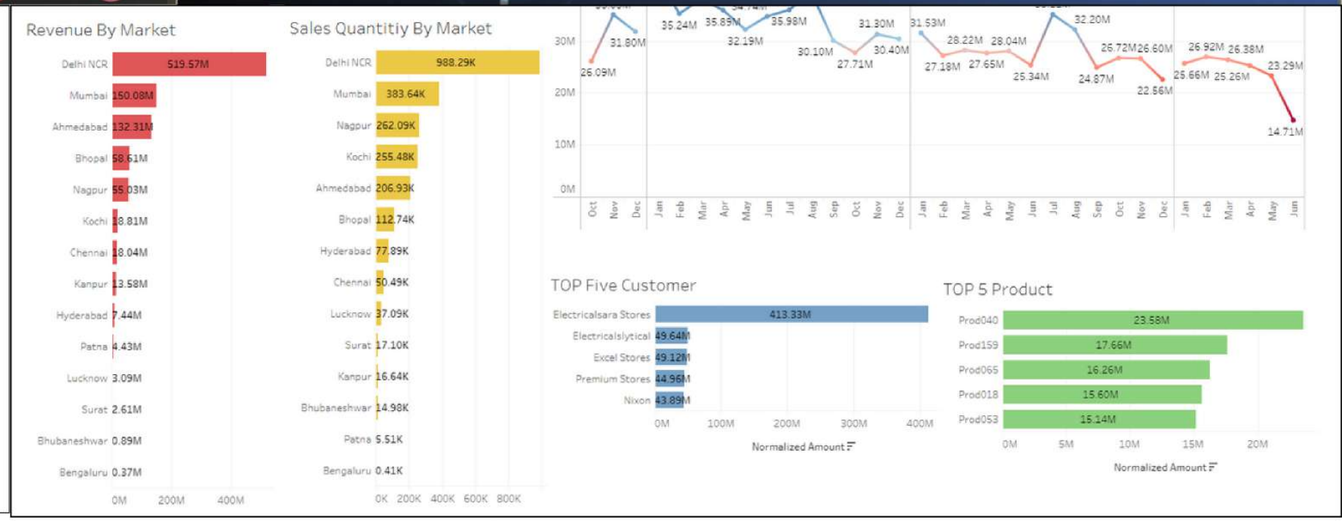


Dashboard

SALES DASHBOARD | OVERVIEW
Total Sales
$733K
▲20.36%
Total Profit
$93K
▲14.24%
Total Profit
#12K
▲26.83%
Category
Region
Ship Mode
Sales and Profit by State
Total CY Sales
Total CY Profit
Monthly Salesby by Segement
Consumer
Corporate
Home Office
27.66K
50.23K
20.15K
44.64K
13.29K
29.71K
Measure
Total CY Sales
Total Sales by Location and Manager
Central $147K
East $213K
South $123K
West $250K
STATE ABOVE AND BELOW THE U.S. SALES AVERAGE
STATE ABOVE AND BELOW THE U.S. PROFIT AVERAGE


HR ANALYTICS DASHBOARD
Education
Employee Count
1,470
Attrition Count
237
Attrition Rate
16.12%
Active Employees
1,233
Avg. Age
37
Attrition by Gender
Female 87
Male 150
Department Wise Attrition
92 (38.82%)
12 (5.06%)
133 (56.12%)
Department
HR
R&D
Sales
No of Employee by Age Group
Bin Size
Employee Count
Jobs Satisfaction Rating
Job Satisfaction
Job Role 1 2 3 4 Grand Total
Healthcare Representative 26 19 43 43 131
Human Resources 10 16 13 13 52
Laboratory Technician 56 48 75 80 259
Manager 21 21 27 33 102
Manufacturing Director 26 32 49 38 145
Research Director 15 16 27 22 80
Research Scientist 54 53 90 95 292
Sales Executive 69 54 91 112 326
Sales Representative 12 21 27 23 83
Grand Total 289 280 442 459 1,470
Education Field Wise Attration
Life Sciences 89
Medical 63
Marketing 35
Technical Degree 32
Other 11
Attrition Rate by Gender For Difference Age Group
Gender Female Male


Year of Order Date
2017
Region Sales Perfomance
34.11%
20.06%
16.76%
29.06%
733,215
Region
Central
East
South
West
Profit Region
Discount Rate
Month of Order Date
Return Rate
Sales Monthly Perfomance
Region Sales


Revenue By Market
Delhi NCR 519.57M
Mumbai 150.08M
Ahmedabad 132.31M
Bhopal 58.61M
Nagpur 55.03M
Kochi 18.81M
Chennai 18.04M
Kanpur 13.58M
Hyderabad 7.44M
Patna 4.43M
Lucknow 3.09M
Surat 2.61M
Bhubaneshwar 0.89M
Bengaluru 0.37M
Sales Quantitiy By Market
Delhi NCR 988.29K
Mumbai 383.64K
Nagpur 262.09K
Kochi 255.48K
Ahmedabad 206.93K
Bhopal 112.74K
Hyderabad 77.89K
Chennai 50.49K
Lucknow 37.09K
Surat 17.10K
Kanpur 16.64K
Bhubaneshwar 14.98K
Patna 5.51K
Bengaluru 0.41K
TOP Five Customer
Electricalsara Stores 413.33M
Electricalslytical 49.64M
Excel Stores 49.12M
Premium Stores 44.96M
Nixon 43.89M
Normalized Amount
TOP 5 Product
Prod040 23.58M
Prod159 17.66M
Prod065 16.26M
Prod018 15.60M
Prod053 15.14M
Normalized Amount

Contact

Wahyu Wibowo

(+62) 812 2626 4526