

BUSINESS PRESENTATION

# Adoption Prediction (Bank Marketing) Prediction

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# Outline

**01**

**Business  
Problem**

**02**

**Explore Data**

**03**

**Model  
Accuracy**

**04**

**Business  
Impact**



# Problem

## Business Problem

How to ensure customers deposit their money in this bank

## Objective

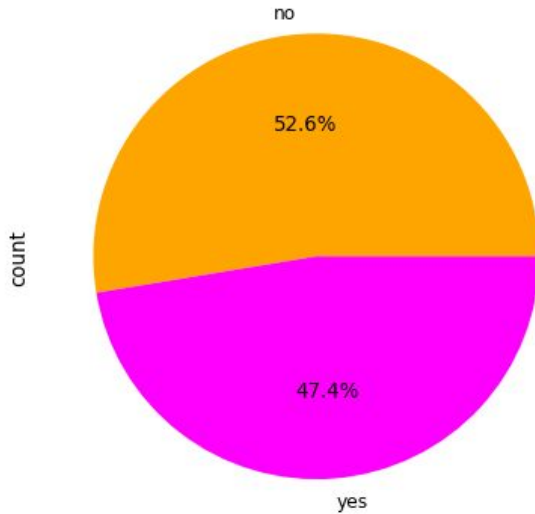
To create a classification model that can predict the probability of customers going to deposit (yes) or not (no) based on various factors.



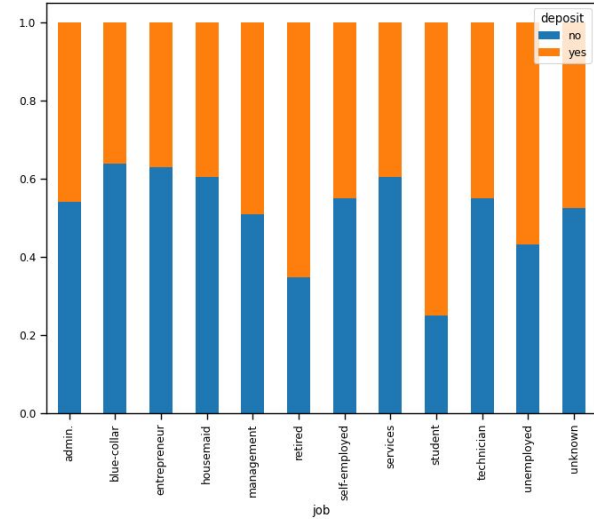
# Explore Data

## Deposit

Pie Chart of Deposit Percentage



## Job



The highest opportunities to deposit their money are those who are retired.



# Model Accuracy

## 84%

This model is quite accurate for predicting customer going to deposit or not.

If there are 100 customers, allowing various backgrounds, such as age, job, education, marital status, having default, balance, housing, and loan. It could be there are 84 customers who are going to deposit their money in bank and were accurately predicted.



# Business Impact

## Reducing Marketing Cost

### Assumption:

- There are 100 callings to persuade customers for deposit money.
- Those callings (phone call) would be accepted by all customers
- 1 calling cost 2,000 IDR
- 30 customers say no to deposit their money
- It means cost for lose customer (marketing cost) would be  $30 \times 2,000 = 60,000$  IDR

### Prediction:

- The model predicts a certain number of people, calling 100 people specifically who are predicted to deposit with 84% accuracy, then 84 people will deposit their money.
- Those callings (phone call) would be accepted by all customers
- 16 customers reject to deposit
- At the same time, cost for lose customer (marketing cost) will be  $16 \times 2,000 = 32,000$  IDR



# Business Impact

## Increasing Revenue

### Assumption:

- There are 100 callings to persuade customers for deposit money.
- Those callings (phone call) would be accepted by all customers
- 1 average customer would deposit 200,000 IDR
- It means bank would only earn  $70 \times 200,000 = 14,000,000$  IDR

### Prediction:

- The model predicts a certain number of people, calling 100 people specifically who are predicted to deposit with 84% accuracy, then 84 people will deposit their money.
- Those callings (phone call) would be accepted by all customers.
- At the same time, bank will earn  $84 \times 200,000 = 16,800,000$  IDR



# Conclusion

In this project, we aimed to develop a classification model to predict customer decision for deposit. We achieved an accuracy of 84% in identifying customers at deposit of money. The model highlighted importance of factors like phone call duration in predicting deposit. We can recommend collecting more data to address specific limitation during the project, like data quality or quantity.



# Thank you!

