My Portofolio
Showcase

Data Science

BURHAN RAFID EKATAMA
26 years old

Brawijaya University
Agroindustrial Engineering (2015 2019)

I have strong passion for uncovering insights and driving data-informed decisions. With expertise in data visualization using Google Looker Studio and Tableau, as well as proficiency in Python and SQL programming, I am dedicated to transforming complex data into visually compelling stories that empower stakeholders to make informed decisions. I am highly adept at analyzing large datasets to identify patterns, trends, and correlations.

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GitHub https://github.com/RapidEkatama

Work Experience

01

Machine Operator
PT. Tjiwi Kimia

Jan 2021 – Sept 2021

- Operate the adhesive making machine
- Responsible for the result of Carton Board related to adhesive used
- Measure and report man power affectiveness in Glue Kitchen Work Division
- Measure quality of the starch material
- Conducting material receipt and organizing the area part

02

Production Supervisor Shift
PT. Ultra Prima Abadi

Sept 2021 – Sept 2022

- Mapping and inline person management of more than 40 people.
- Maintaining a minimum production target of 80 percent.
- Checking and monitoring the entire production process.
- Performing OEE calculations for each shift.
- Analyze constraints during production.

03

Production Line Leader
PT. Smoore Technology Indonesia

Sept 2022 – Feb 2023

- Calculate production estimated target (around 70.000 pcs) and material requirement.
- Input production data recap and write report on production results in one shift.
- Correct the engine production time until it decreases by 2 seconds.
- Reducing the effects of machine downtime by supporting machine repairs or line shifts.

Course

Data Science Bootcamp by dibimbing.id **(January – July 2023)**

- Learn about how to become Data Scientist
- Python and SQL programming language
- Data cleaning and manipulation
- Dashboard using Google Looker Studio
- Exploratory Data Analysis
- Machine Learning (Supervised and Unsupervised)

Becoming Profesional Virtual Assistant by habiskerja **(August 2023)**

- VA basic tools
- Email Management
- Event Planning, Meeting, Calendar Management

Basic Data Analyst Package Course by codingstudio **(Ongoing)**

- Fundamental of Excel
- Fundamental of Python Programming Language
- Fundamental Algorithm

Course And Project

Project

Course And Project

World Most Deadly Disease

Heart disease become the first killer in the world with various symptoms and causes
Objective : is to predict the patient got heart disease or not. So in the future this disease can be decreased.

Link Project

Do You Get Panic Now?

The last few years, Mental illness (anxiety) become increased and become a topic of conversation
Objective : is to predict the patient got Panic attack or not. So in the future this mental illness can be overcome and handled professionally.

Link Project

World Most Deadly Disease

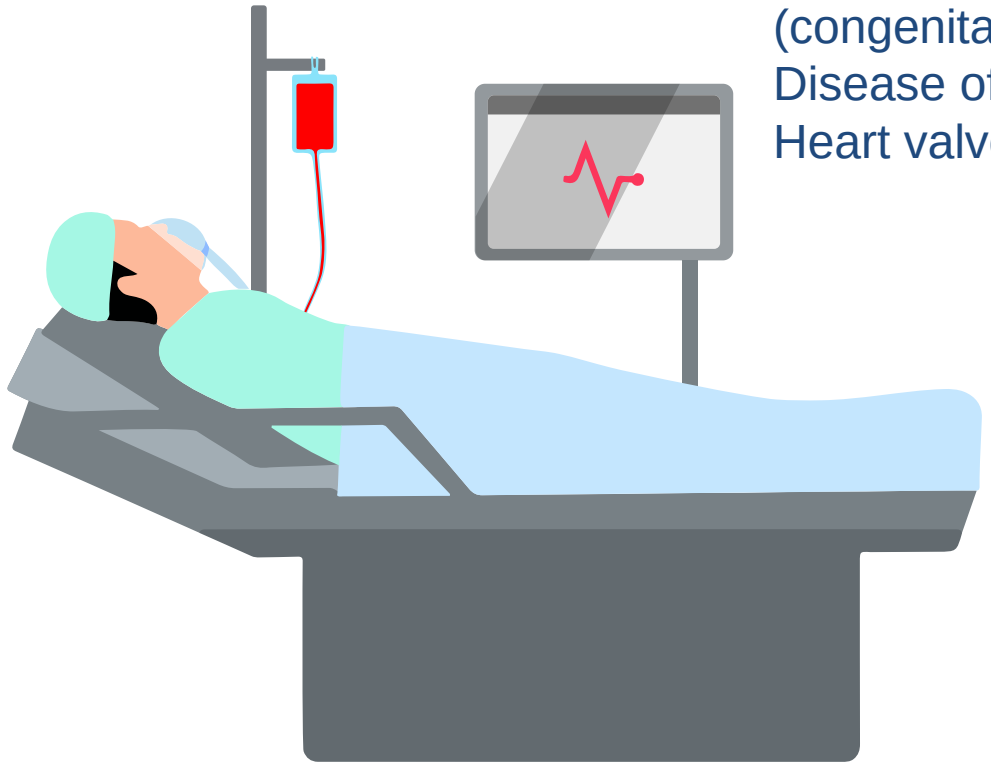
Burhan Rafid Ekatama

Content

Problem Overview
And
Data Understanding

Problem Overview

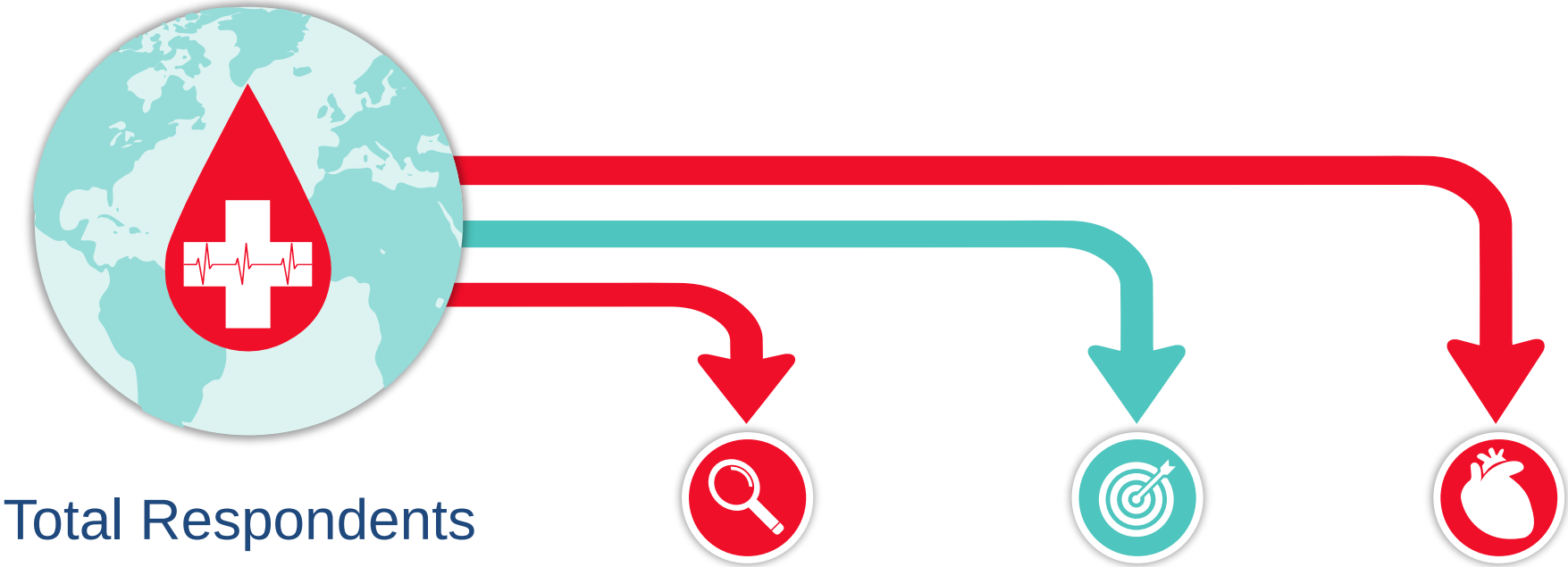
Heart disease describes a range of conditions that affect the heart. Heart diseases include Blood vessel disease, such as coronary artery disease, Irregular heartbeats (arrhythmias), Heart problems born with (congenital heart defects), Disease of the heart muscle, Heart valve disease



Based on cdc.gov, there are number of deaths for leading causes of death

1. **Heart Disease**
2. **Cancer**
3. **COVID - 19**
4. **Accidents**
5. **Stroke**
6. **Chronic Lower Respiratory Disease**

Problem Overview



Total Respondents

70.000 person

Positive and Negative

35021 Person, Negative
34979 Person, Positive

Goals

Predict best model for patients who are suspected of having Heart Disease or not

Hope

Can reduce the risk of death from heart disease and can detect early from the symptoms of the disease

Data Understanding

13 Columns (id, age, gender, height, weight, ap_hi, ap_lo, cholesterol, gluc, smoke, alco, active, cardio)

Missing and duplicated value checking

Columns Relabelling

Delete the row with unreasonable values

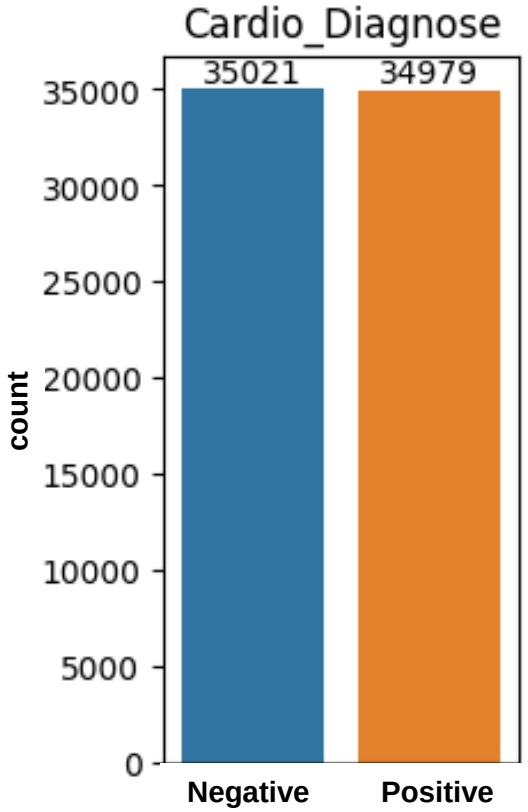
Encoding and deleting column “ID”

68.816 Respondents

13 Columns (Age, Height, Weight, Sys_Blood_Press, Dias_Blood_Press, Cholesterol, Glucose, Smoking, Alcoholic, Physical Activity, Cardio Diagnose, Gender_A_Female, Gender_A_Male)

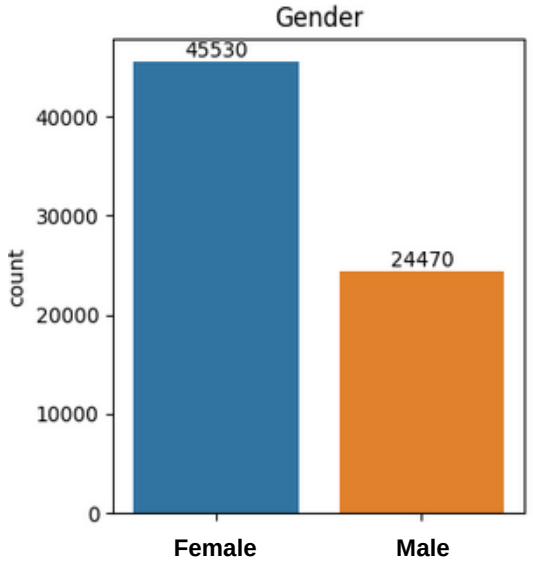
(By Multivariate analysis (**Correlation**), all of variables there is not have a high value (> 0,8), **except Systole** and **Diastole Blood Pressure**)

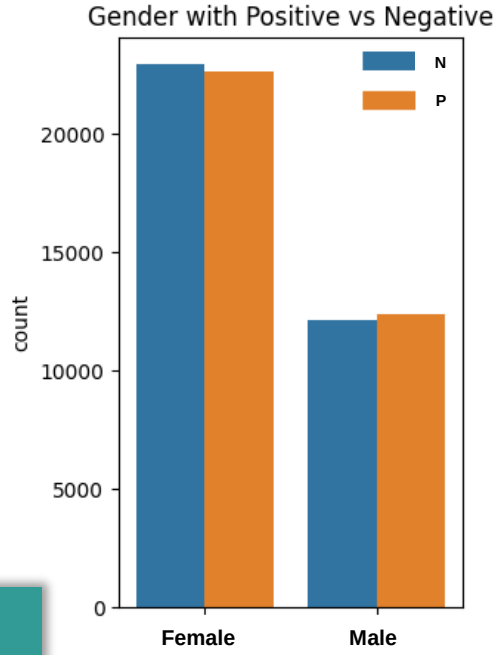
Data Understanding



From table beside, the negative and positive respondents is nearly balanced

50.03 % on Negative and
49.97 % on Positive





From table above, the Female respondents higher than Male respondents

But, If each Gender separate by positive or negative diagnose, it has nearly result.

Modelling and Recommendation

Modelling

Modelling Result

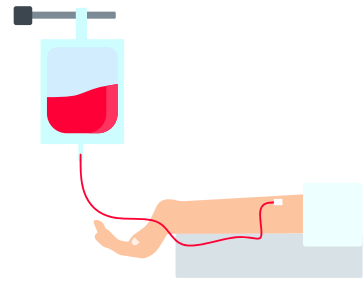
Modelling Performance

	Model	Recall	AUC	F1 Score	Accuracy
0	Logistic_Regression	0.649252	0.707719	0.687864	0.708297
1	Random_Forest	0.694306	0.712908	0.705540	0.713092
2	Decision_Tree	0.633989	0.634045	0.631717	0.634045
3	Extra_Trees	0.692838	0.703541	0.698321	0.703647
4	Gradient_Boosting	0.689169	0.733937	0.719804	0.734380
5	Light_Gradient_Boosting	0.687115	0.733629	0.718980	0.734089
6	Hist_Gradient_Boosting	0.689463	0.734084	0.720000	0.734525

Based on tabel beside, it can be concluded that the best model is **Hist Gradient Boosting**

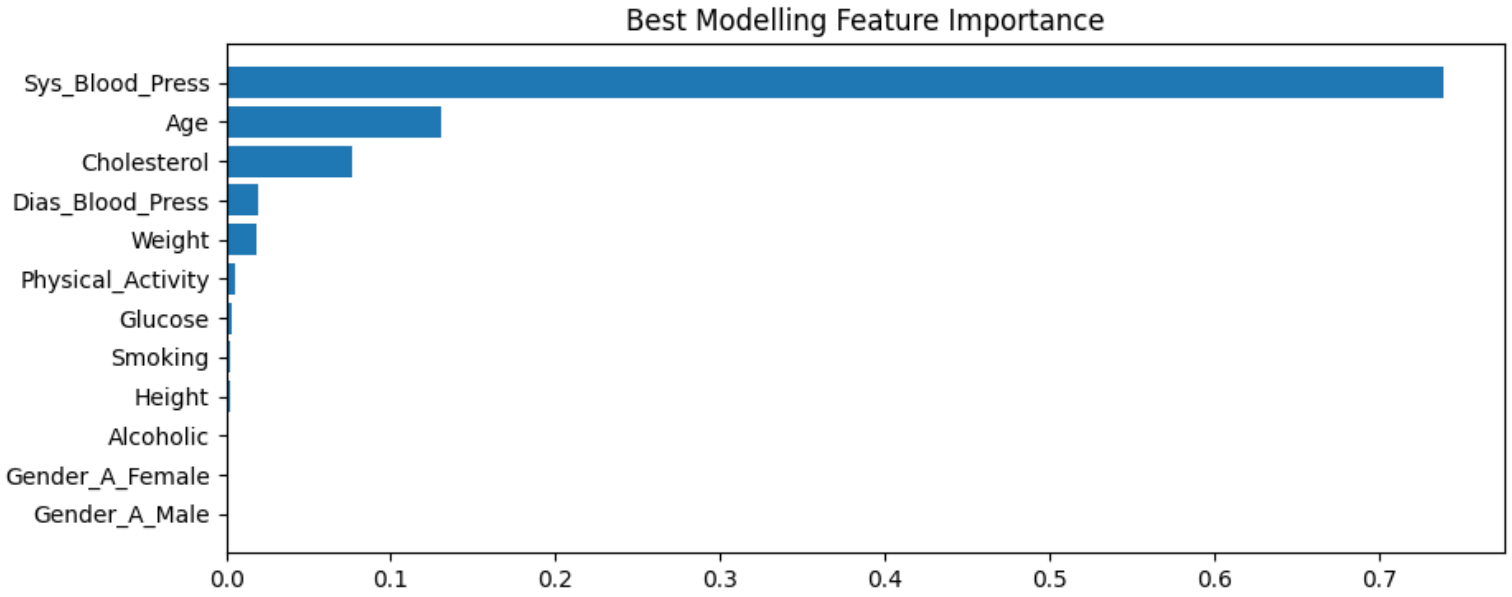
1. Highest **Accuracy** Value (0.7345)
2. Highest **F1 Score** Value (0.72)

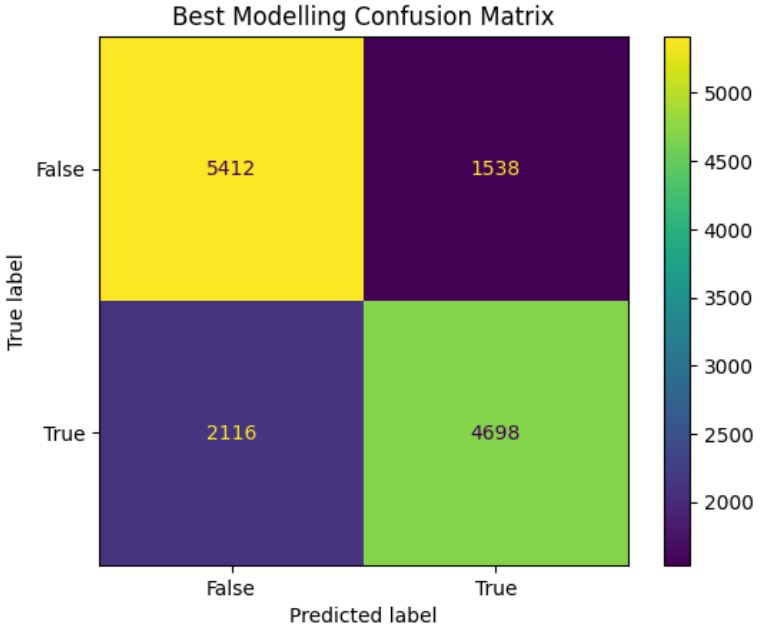
The Recall value on **Hist Gradient Boosting** is **0.689**, meaning that out of 100 person were tested, about **68 – 69 person** get into **Heart Disease**



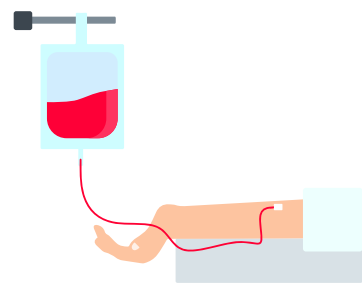
Modelling

Modelling Result





Based on tabel above, it can be concluded that **the most** common cause of **heart disease** is **Systole Blood Pressure**, **Age**, and **Cholesterol rate**



Question
And
Society Insight

Some Questions

Question 1

From people with **Heart Disease**, how many on **maximum** and **minimum point** for the **priority**? So we can give more attention into it

Max and Min Value on Age, Weight, Cholesterol, Systole, and Diastole by Positive Respondents

	Category	Max Values	Min Values
0	Age (year)	64.970000	39.110000
1	Weight	200.000000	21.000000
2	Cholesterol	3.000000	1.000000
3	Systole	240.000000	70.000000
4	Diastole	190.000000	8.000000

From table beside, we know that all of positive respondent were in middle-aged, and a wide range of weight, Systole rate, and Diastole rate.

Everyone has the possibility of this disease

Some Questions

Question 2

Separated by **cholesterol** (most common cause of narrowing of the arteries), how **mean** of the **Age** and **Systole**?

Cholesterol	Cholesterol_M	Age	Sys_Blood_Press
1	Normal	19954.34	132.47
2	Below_Normal	19878.73	137.56
3	High	20628.66	135.36

From table beside, from all of positive Heart Disease respondents we know that on **normal cholesterol rate**, has the mean age is 19954,34 days (**54+ years old**) and mean Systole is **132.47**. On **high cholesterol rate**, has the mean age is 20628.66 days (**56+ years old**) and mean Systole is **135.36**

So we can conclude that person is 54 years old and above, with high Systole (standard value is 120) has a **high risk** of heart disease

Society Insight

Heart disease describes a range of **conditions that affect the heart**.
Heart diseases include:

- Blood vessel disease, such as coronary artery disease
- Irregular heartbeats (arrhythmias)
- Heart problems you're born with (congenital heart defects)
- Disease of the heart muscle
- Heart valve disease

Many forms of heart disease can be prevented or treated with **healthy lifestyle choices**.

mayoclinic.org

Society Insight

Coronary artery disease is a common heart condition that affects the major blood vessels that supply the heart muscle. **Cholesterol deposits (plaques)** in the heart arteries are usually the cause of **coronary artery disease**.

Symptoms of coronary artery disease can include chest pain, chest tightness, chest pressure and chest discomfort (angina), shortness of breath, pain in the throat, upper belly area or back, weakness or coldness in the legs or arms if the blood vessels in those body areas are narrowed

Risk factors for heart disease include:

Age, sex, family history, smoking, unhealthy diet, high blood pressure, high cholesterol, diabetes, obesity, lack of exercise, stress

mayoclinic.org

Society Insight

There is some **tips** which you can use to **prevention** the heart disease:

- Don't smoke.
- Eat a diet that's low in salt and saturated fat.
- Exercise at least 30 minutes a day on most days of the week.
- Maintain a healthy weight.
- Reduce and manage stress.
- Control high blood pressure, high cholesterol and diabetes.
- Get good sleep. Adults should aim for 7 to 9 hours daily.

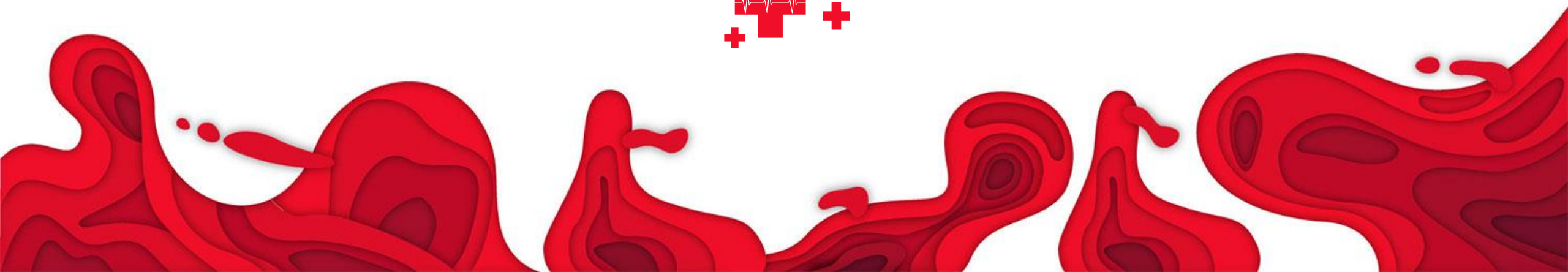
Based on the best model chosen, it is hoped that it can more **quickly detect** a person or patient who is suspected of having a Heart Disease. Because the **faster** the first treatment of a patient can **increase the percentage of recovery** from that patient.

mayoclinic.org

References

https://www.cdc.gov/nchs/fastats/leading-causes-of-death.html

https://www.mayoclinic.org/diseases-conditions/heart-disease/symptoms-causes/syc-20353118



THANK YOU

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Project link