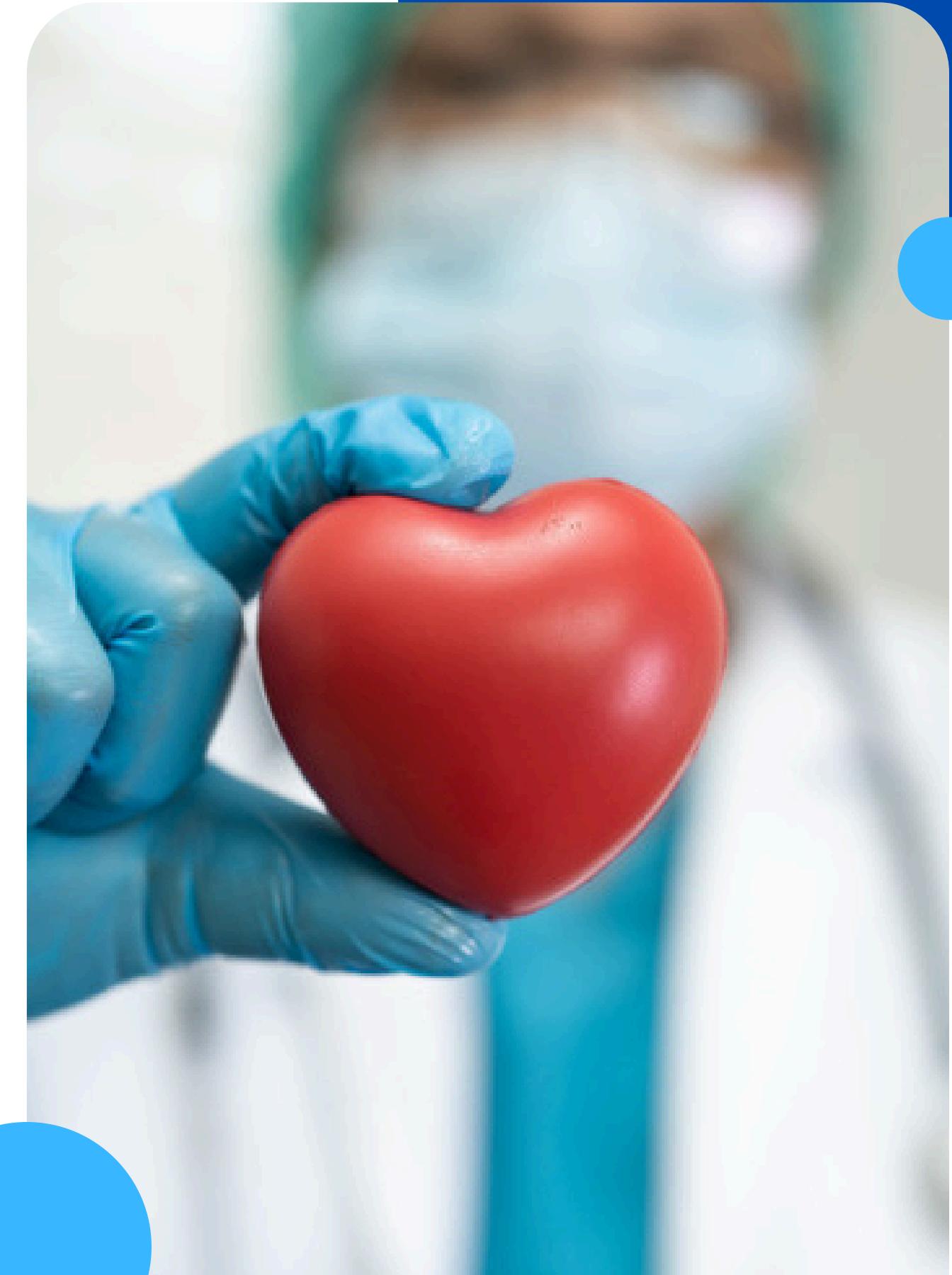


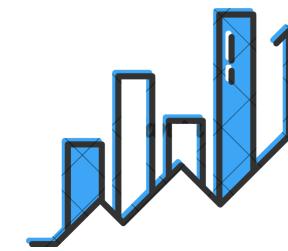


HeartGuard

**Early Detection of Coronary
Heart Disease Risk Using IoT
and Chatbot System**



Coronary Heart Disease



Cardiovascular disease causes **17.9 million** deaths each year and is the leading cause of death worldwide (WHO, 2020).



In the world, **every 3 seconds**, someone dies from coronary heart disease. **1 in 10 people in Indonesia die** from coronary heart disease.



Electrocardiography (ECG) can be used to record the electrical activity of a patient's heart and assess whether the patient's heart rate and rhythm are normal or not.

Problems



CORONARY HEART DISEASE

FACILITY

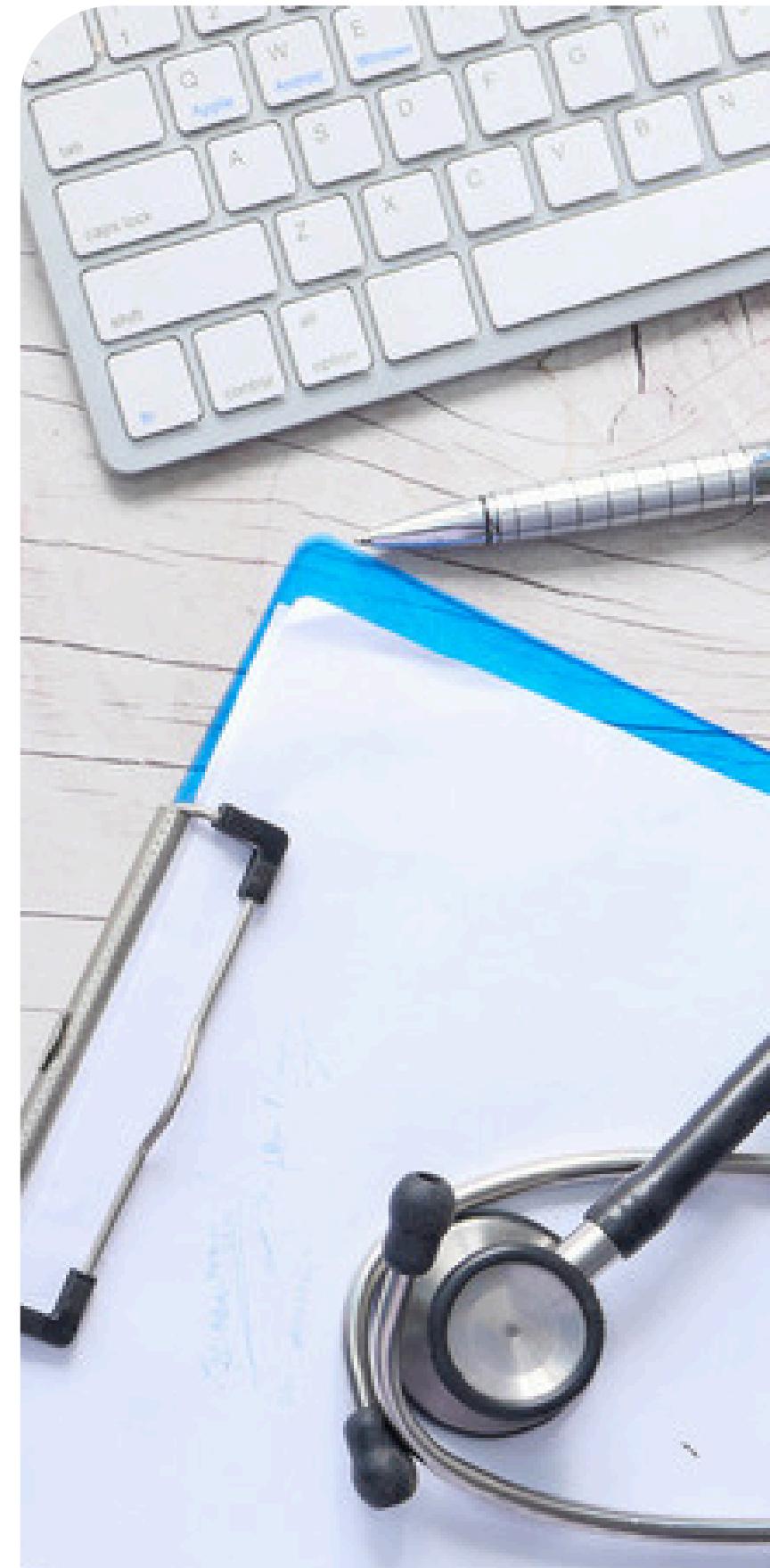
Monitoring the potential for heart disease requires healthcare facilities that are not always adequate in every region of Indonesia.

COST CONSULTATION

The cost of consultation for coronary heart disease.

DEPENDENCY ON MEDICATIONS

Dependency on medications such as nitroglycerin or beta-blockers to control symptoms or prevent heart attacks can become a burden.



Our Team



SYAHVAN ALVIANSYAH D. R

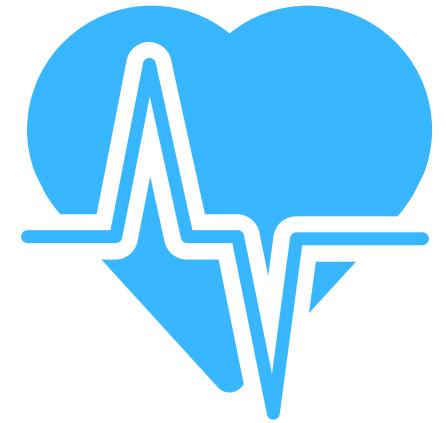


RIZAL FADILAH



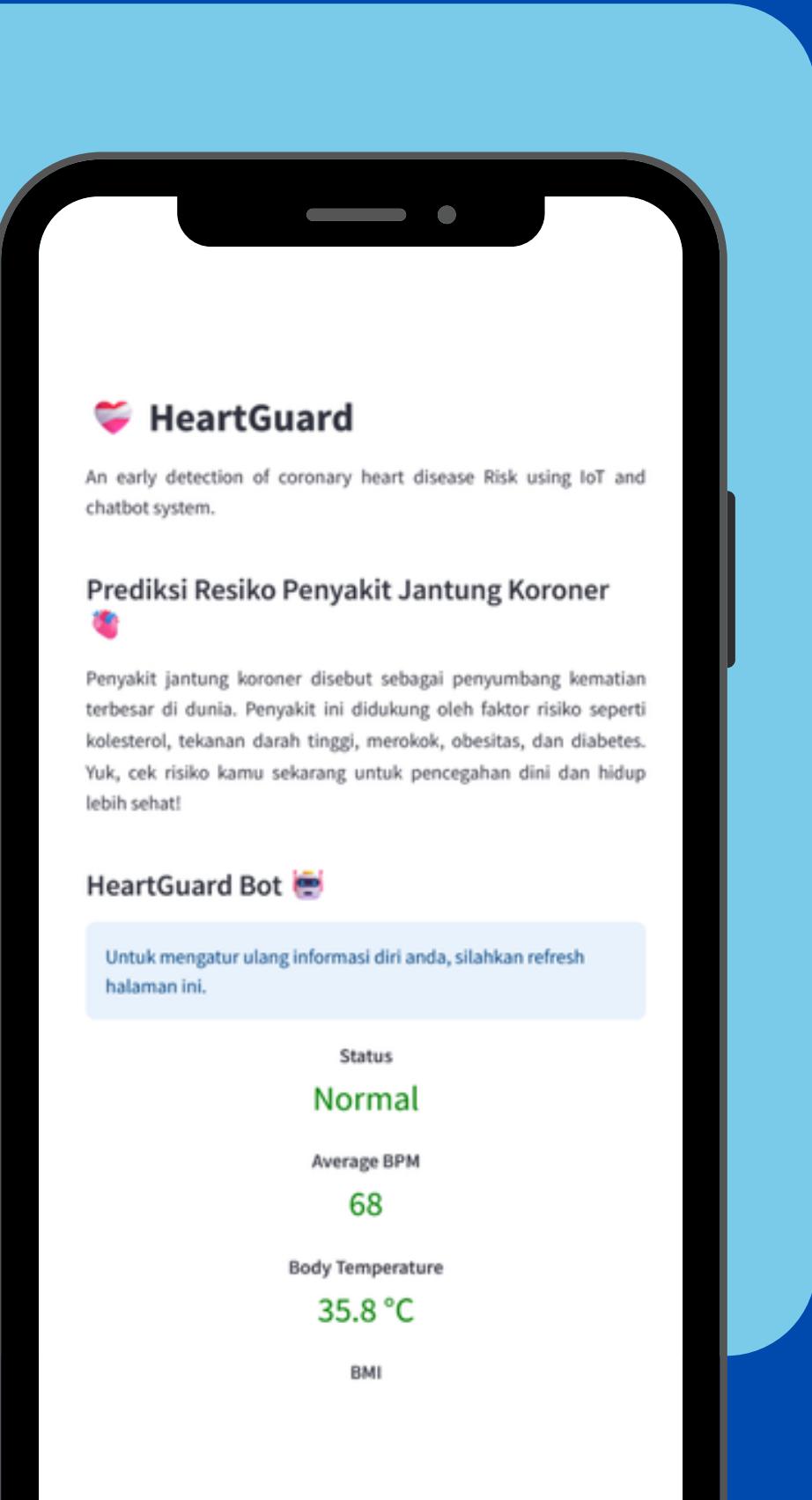
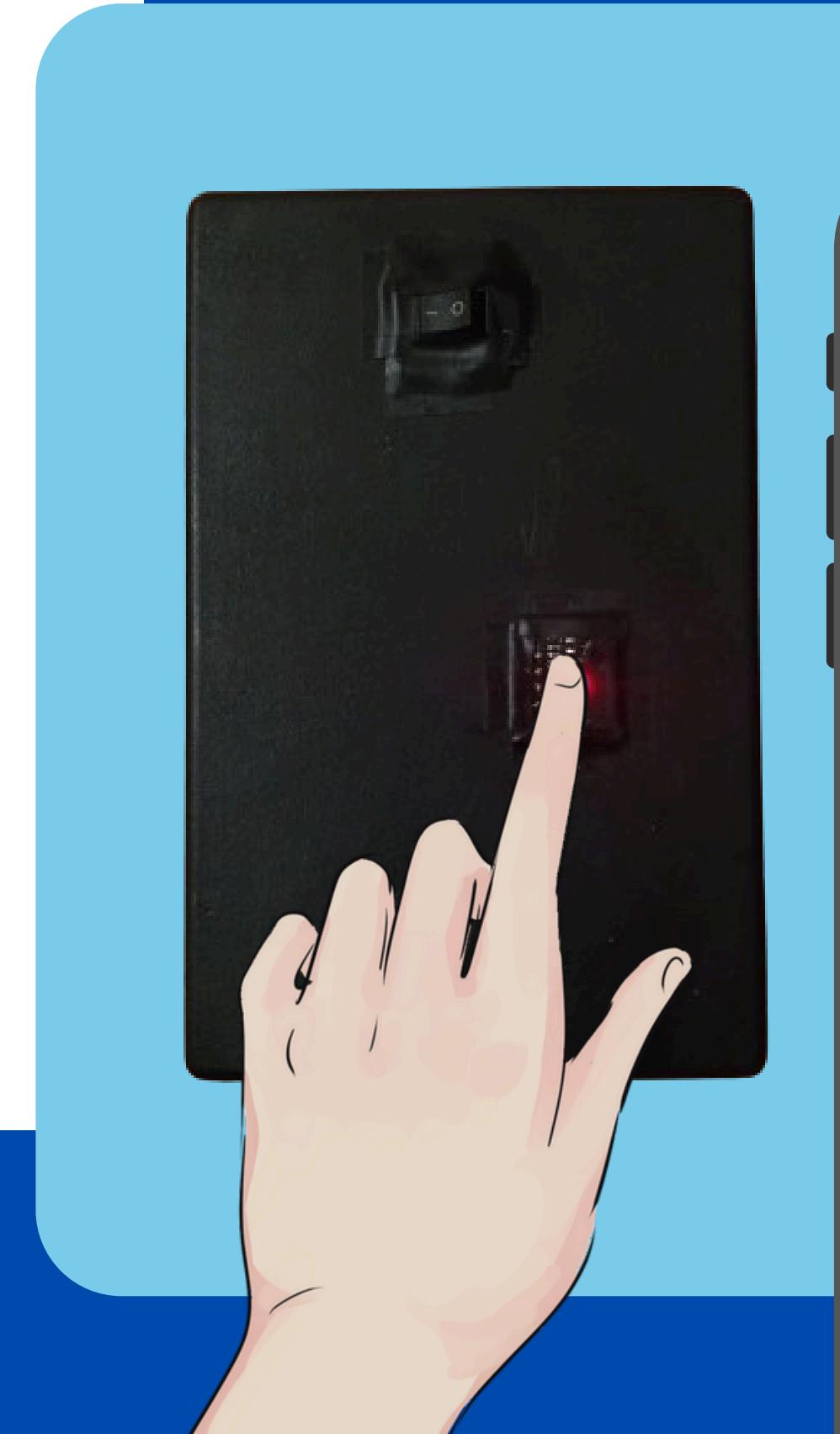
MOHAMAD SOLKHAN N.

Introduction Our Solution



HeartGuard

An Early Detection of Coronary Heart Disease Risk Using IoT and Chatbot System



HeartGuard

An early detection of coronary heart disease Risk using IoT and chatbot system.

Prediksi Resiko Penyakit Jantung Koroner

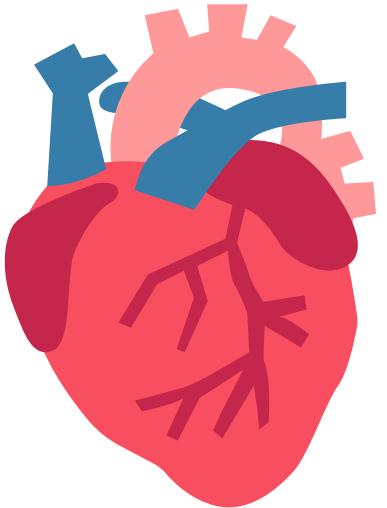
Penyakit jantung koroner disebut sebagai penyumbang kematian terbesar di dunia. Penyakit ini didukung oleh faktor risiko seperti kolesterol, tekanan darah tinggi, merokok, obesitas, dan diabetes. Yuk, cek risiko kamu sekarang untuk pencegahan dini dan hidup lebih sehat!

HeartGuard Bot 🤖

Untuk mengatur ulang informasi diri anda, silahkan refresh halaman ini.

Status	Normal
Average BPM	68
Body Temperature	35.8 °C
BMI	

Our Feature



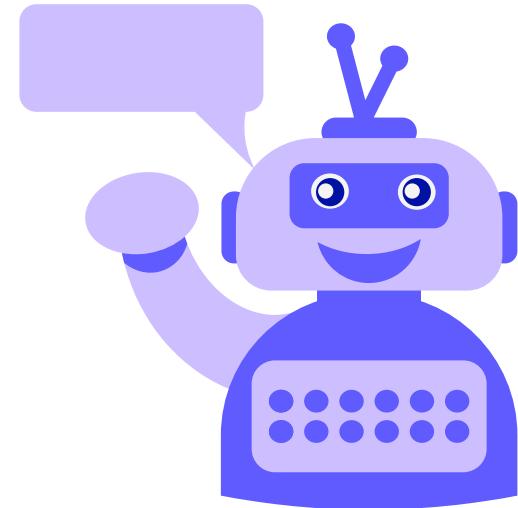
Coronary Heart Disease Risk Prediction

Utilize machine learning algorithms to predict the likelihood of coronary heart disease early, allowing for timely intervention and preventive measures.



Health Information Dashboard

Display key health metrics such as Heart Rate, Body Temperature, and Body Mass Index (BMI) for comprehensive health tracking and analysis.



AI Chatbot

Engage with an intelligent AI chatbot for real-time risk assessment, health queries, and personalized recommendations based on individual health data.

Web Application



The image shows two mobile devices (a tablet and a smartphone) displaying the HeartGuard web application. The application interface includes a header with the logo "HeartGuard" and a sub-header "An early detection of coronary heart disease Risk using IoT and chatbot system." Below this is a section titled "Prediksi Resiko Penyakit Jantung Koroner" with a brief description of the disease and risk factors. A "HeartGuard Bot" section follows, featuring a status summary table and a chatbot conversation. The tablet screen shows a detailed list of symptoms for coronary heart disease, while the smartphone screen shows a simplified version of the same information.

HeartGuard
An early detection of coronary heart disease Risk using IoT and chatbot system.

Prediksi Resiko Penyakit Jantung Koroner

Penyakit jantung koroner disebut sebagai penyumbang kematian terbesar di dunia. Penyakit ini didukung oleh faktor risiko seperti kolesterol, tekanan darah tinggi, merokok, obesitas, dan diabetes. Yuk, cek risiko kamu sekarang untuk pencegahan dini dan hidup lebih sehat!

HeartGuard Bot

Untuk mengatur ulang informasi diri anda, silahkan refresh halaman ini.

Status	Average BPM	Body Temperature	BMI
Normal	68	35.8 °C	25.1

Halo! Bagaimana keadaan jantung saya? 😊

Halo, Syahvan!
Kamu memiliki jantung yang sehat 😊
Apakah ada yang ingin kamu ketahui mengenai penyakit jantung koroner?

apa saja gejala dari penyakit jantung koroner? 🤔

Berdasarkan informasi yang tersedia, gejala-gejala penyakit jantung koroner meliputi:

1. Gagal jantung, yang dapat menyebabkan penumpukan cairan dalam paru-paru, kesulitan bernapas, dan pembengkakkan pada kaki, hati, atau perut.

Link Web App : <https://heartguard.streamlit.app/>

Tech Tools



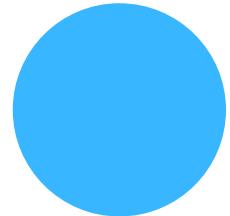
Firebase

 Streamlit

MACHINE LEARNING
GRADIENT BOOSTING

 Meta AI
LLaMA

LangChain

 groq™

Dataset



The publicly available dataset on Kaggle originates from an ongoing cardiovascular study in Framingham, Massachusetts, and aims to predict the 10-year risk of future coronary heart disease (CHD) in patients.



Sex



Age



Current Smoker



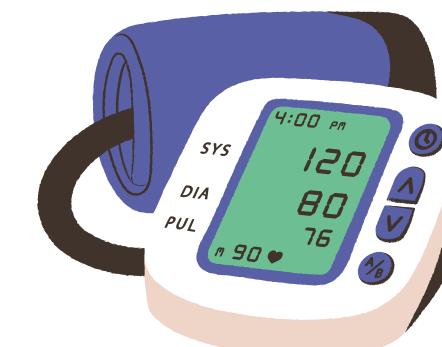
Cigarette/Day



Blood Pressure Medication



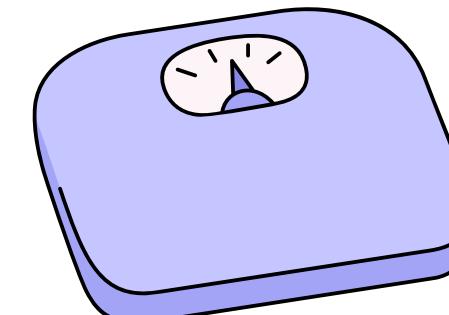
Stroke



Hypertension



Diabetes



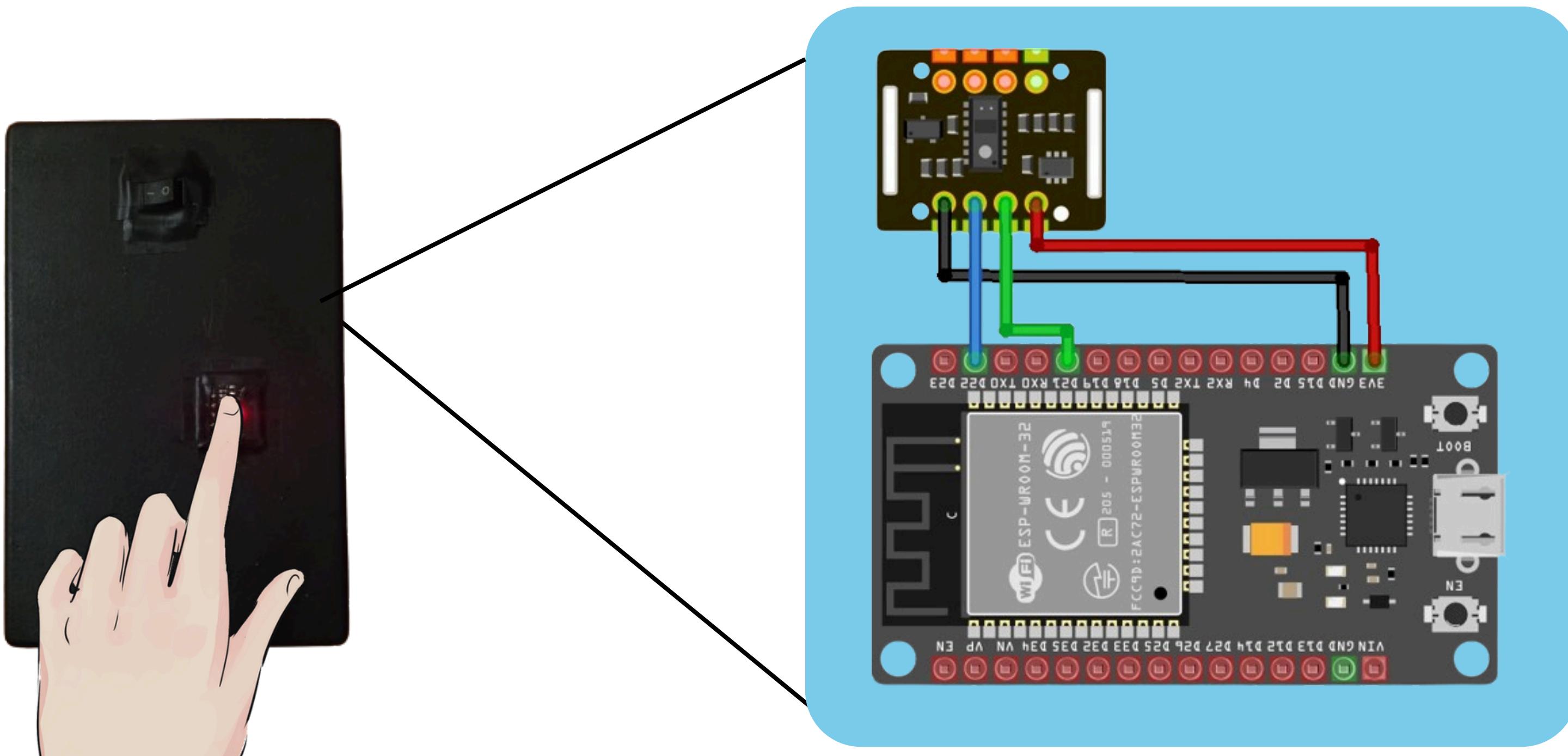
Body Mass Index (BMI)



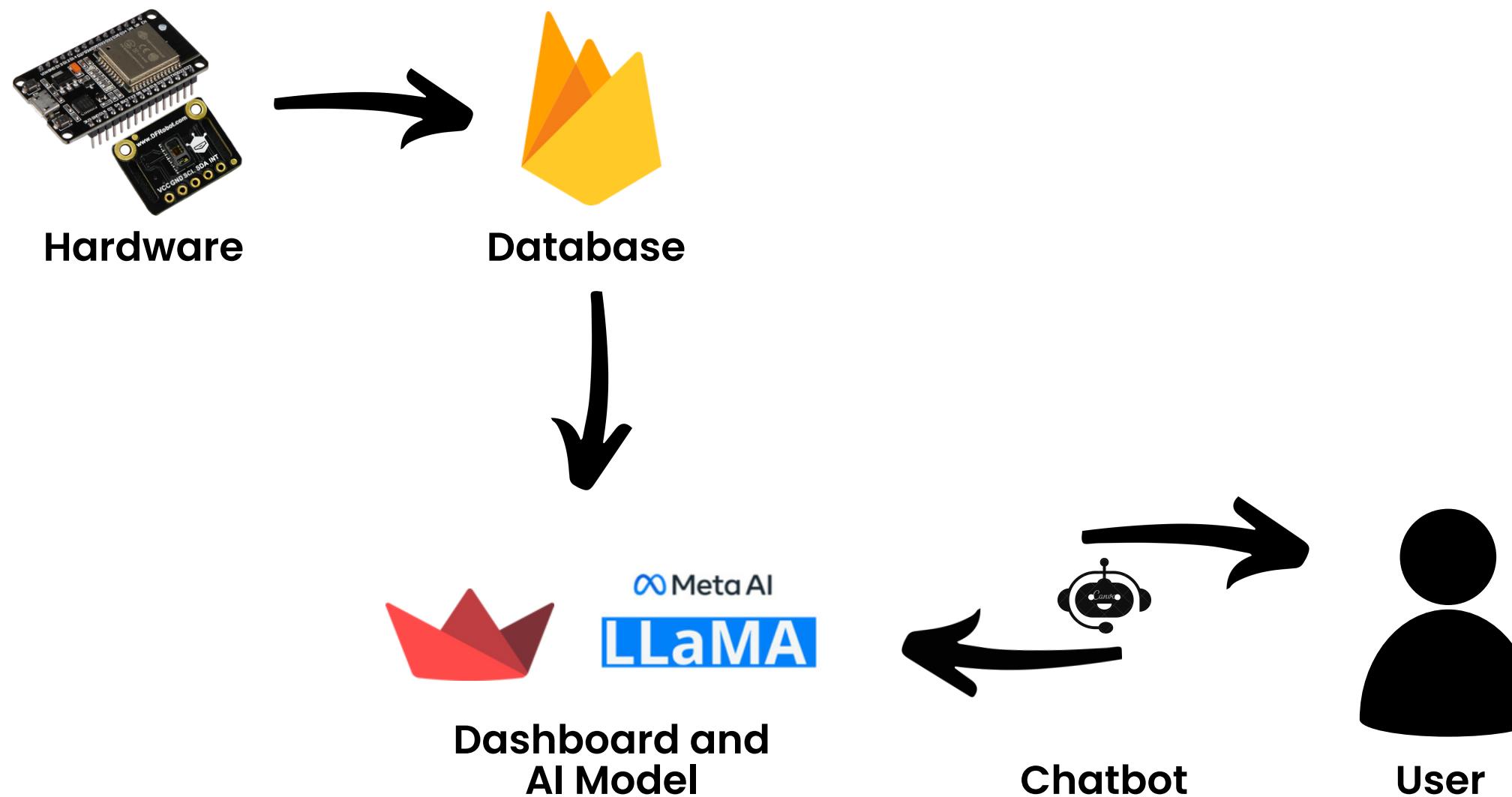
Heart Rate

Link Dataset : <https://www.kaggle.com/datasets/dileep070/heart-disease-prediction-using-logistic-regression>

Overview



User Flow



Link Video Demo : <https://bit.ly/VideoDemoHeartGuard>

Unique Value Proposition



EASY TO USE

Easy-to-use Streamlit web app for clear and actionable health insights.

EARLY DETECTION

Accurate early detection of coronary heart disease risk to address issues before they become critical.

REAL-TIME HEALTH MONITORING

Continuous tracking of vital signs such as BPM, Body Temperature, and BMI through an intuitive dashboard.

AFFORDABLE

Our product offers a 93% cost reduction compared to doctor consultations.

Business Model



B2C Business to Customers (Primary)

Offer the IoT device directly to individual consumers for personal health monitoring and early detection of coronary heart disease.



B2B Business to Business (Secondary)

Collaborate with healthcare providers, clinics, and insurance companies to integrate the product into their services and offer it as part of their health management solutions.

Only **Rp 70.000** for one **HeartGuard IoT device**

Potential Market Size & Target Customers



Total Available Market
INDONESIA

8.428 T

Serviceable Available Market
JAKARTA

352,8 T

Serviceable Obtainable Market
3% from SAM

10,58 T

Rina

a 55-year-old woman with a family history of heart disease, wants to monitor her health and receive early notifications if any risks increase.



Dr. Andi

a 35-year-old cardiologist at a metropolitan hospital, needs a device to monitor heart patients' conditions in real-time and remotely to reduce costs and provide more proactive care.



Source:



Marketing Strategy



Social Media Campaign

#JantungSehat
#CegahResikoPenyakitJantungKoroner

Key Message

"Deteksi Dini Penyakit Jantung Koroner yang Terjangkau, Akurat, dan Mudah Diakses untuk Semua"

Channel



Key Opinion Leader (KOL)



Online Ads

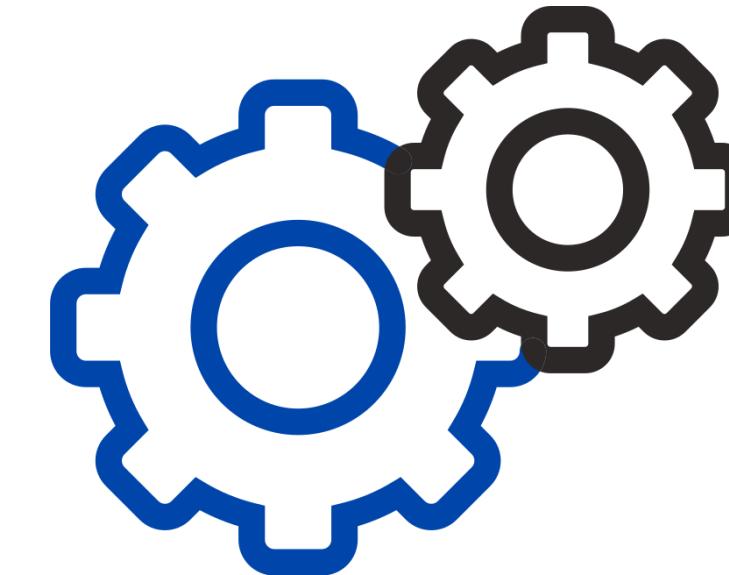
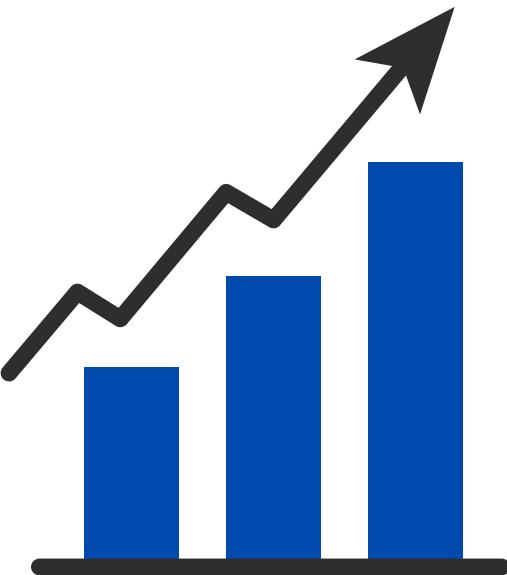
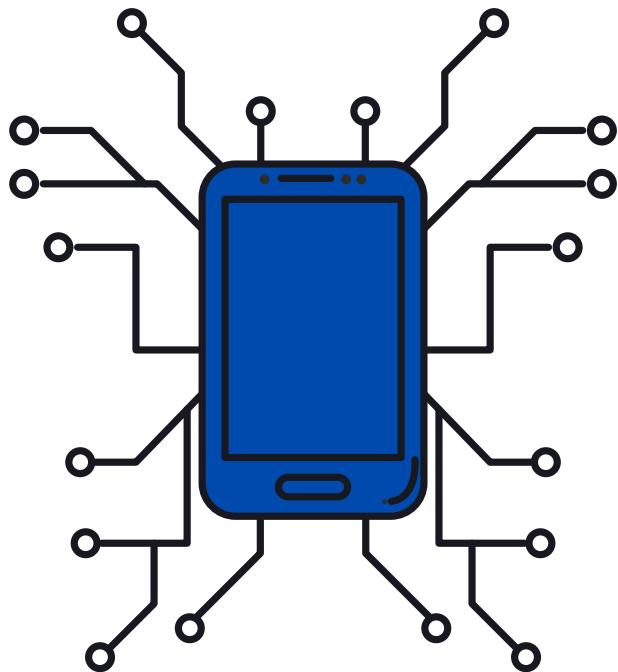


Content Marketing



Partnership with Government, Hospital, & Community

Solid Strategy Ready to Scale Up Quickly



Year 1
Product Development →

Year 2
Market Penetration →

Year 3
Operational Improvement →

Year 4
Expand Business →

The smartphone screen shows the following content:

- HeartGuard**
- An early detection of coronary heart disease Risk using IoT and chatbot system.
- Prediksi Resiko Penyakit Jantung Koroner**
- A small blue heart icon.
- Penyakit jantung koroner disebut sebagai penyumbang kematian terbesar di dunia. Penyakit ini didukung oleh faktor risiko seperti kolesterol, tekanan darah tinggi, merokok, obesitas, dan diabetes. Yuk, cek risiko kamu sekarang untuk pencegahan dini dan hidup lebih sehat!
- HeartGuard Bot 🤖**
- Untuk mengatur ulang informasi diri anda, silahkan refresh halaman ini.
- Status**: Normal
- Average BPM**: 68
- Body Temperature**: (not visible)



**Early Prevention for Coronary
Heart Disease Risks**
Better Way for a Better Life