CARDIOease

Your cardio on the GO

CONTENTS

INTRODUCTION

We still fail to provide good medical facilities in rural or remote areas of our country. Most of the experienced doctors are posted in urban cities, ergo the rural areas are neglected.

IDENTIFYING THE PROBLEM

ISOLATION

Isolation from the urban areas, where healthcare experts are present.

INEXPERIENCED DOCTORS

All the experienced doctors take high profile jobs in cities, neglecting rural areas.

INADEQUATE FACILITIES

Due to lack of proper infrastructure the facilities remain bound mostly to the urban areas only.

OUR MAIN OBJECTIVE

AGE	62
GENDER	Male
HYPERTENSION	Yes
LOCATION	India

1

Promise affordable healthcare

Track the medical history and identify the test reports

2

3

Use a machine learning model to predict about the ailments.

Instruct the patient best possible solutions.

4

IMPLEMENTATIONS

- We plan to design an android application which will take input of certain parameters from the test reports of the patient.
- Give predictions, whether or not the patient suffers from any heart disease.
- Assure the doctors about the patient’s heart conditions.

WORKFLOW

1

Data of the patient is collected from the previous records and reports of the patient and data is fed into the application.

2

If the user is unaware of what to feed in a certain field, UI is well designed to guide the user in such a situation.

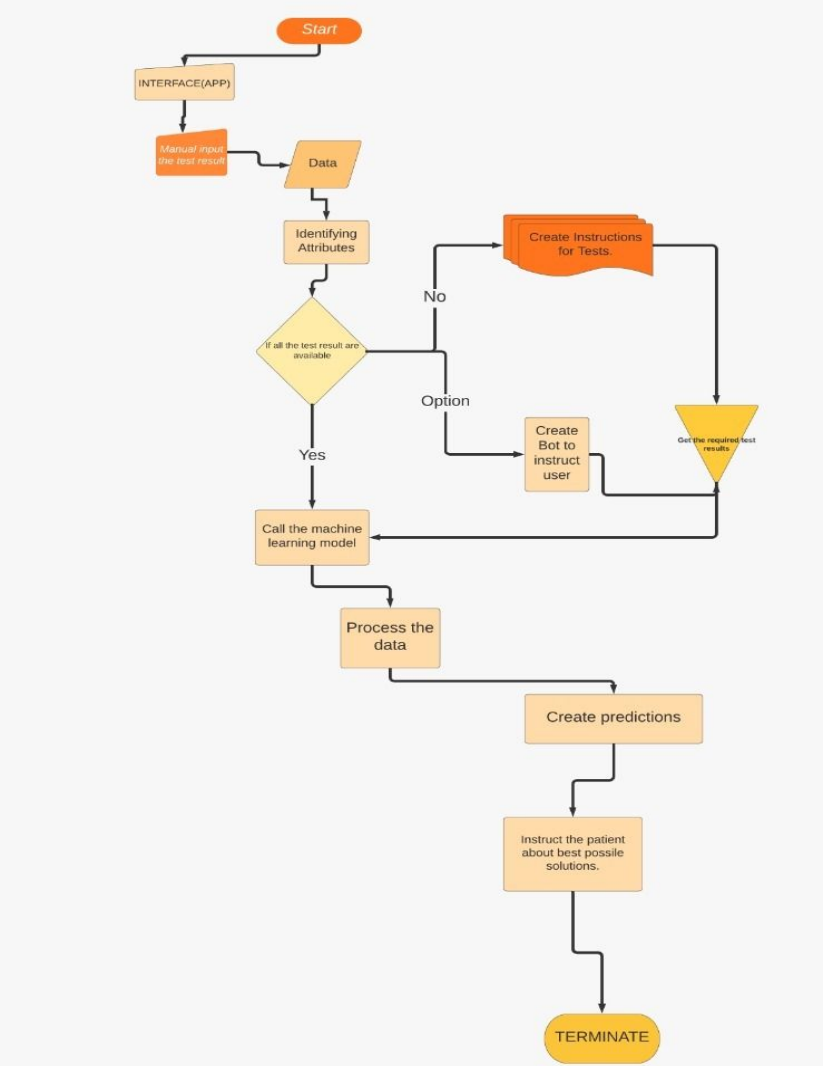
3

After the complete data is fed to the application the task is handed over to the Machine Learning Algorithms to predict the problem as per the input with the minimum possibility of error.

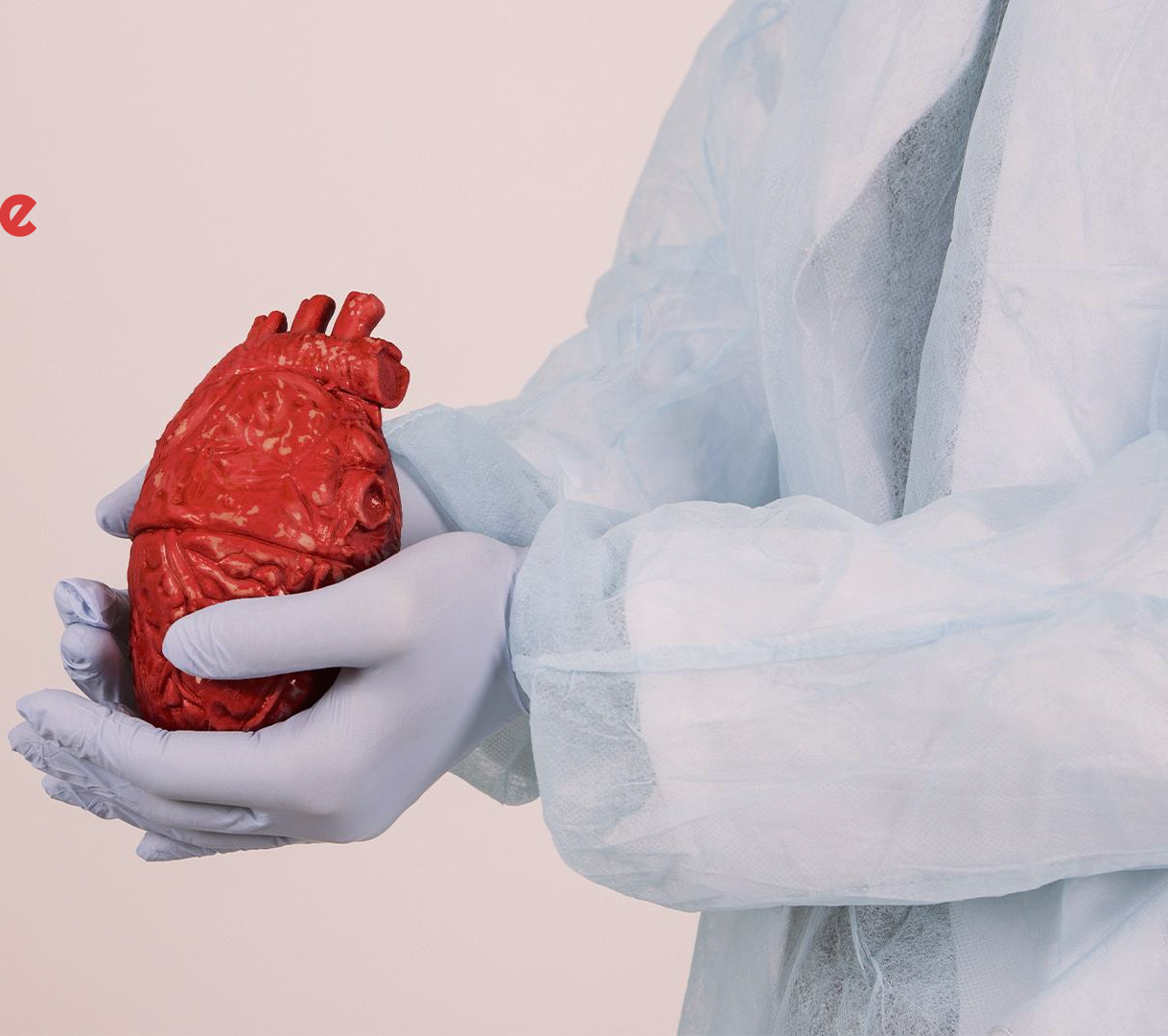
4

Once the prediction is made, the application displays the predicted results on a separate screen of the application.

BLOCK DIAGRAM

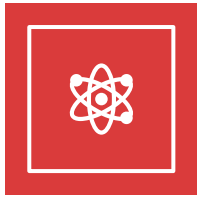


Heart disease Let's defeat, Keep a healthy heart beat!



Of the 156,231 sub-centres hospitals in India, 78,569 were without male health workers, 6,371 without auxiliary nurse midwives and 4,263 without either, according to Rural Health Statistics, 2017.

RESEARCH



1. DATA COLLECTION

The sanity of the Data is a integral aspect of Data Science, and essential for the accuracy of the model too.

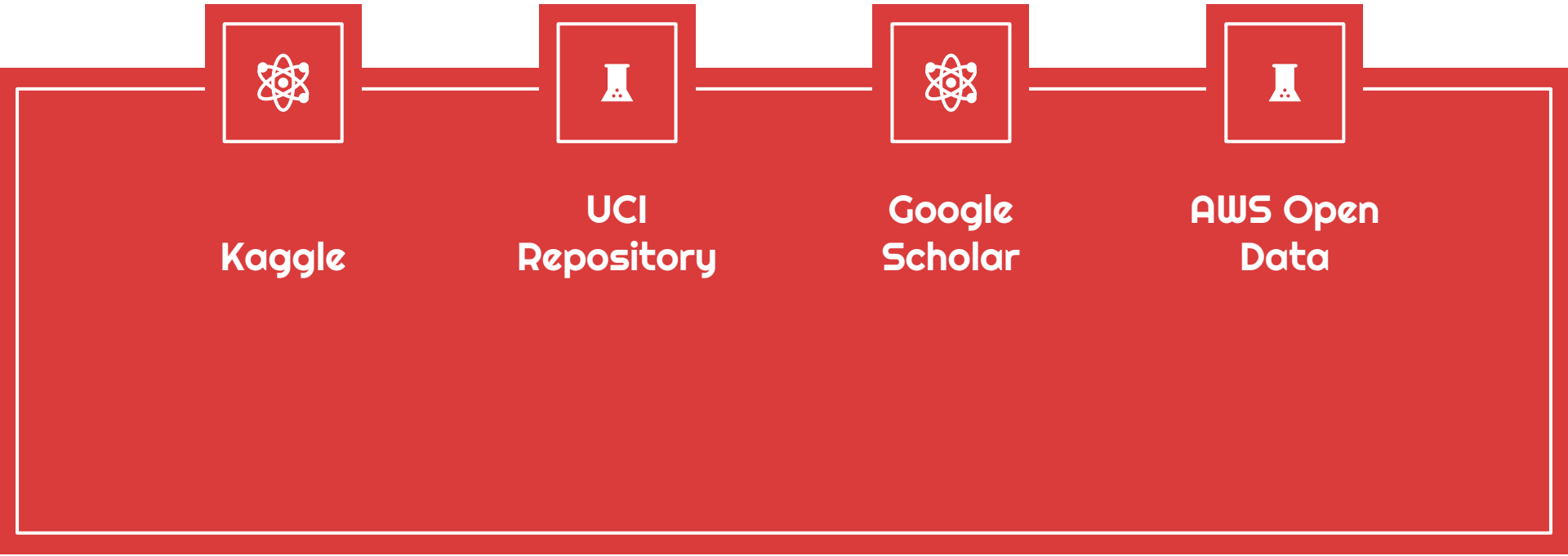
2. THE ACCURACY OF THE MODEL

There are a lot of research papers formulating and improving the accuracy of the heart disease predictions using neural networks.

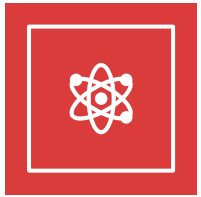
EXISTING RESEARCH

1. Globally, the medical industry is presumably “information rich” and “knowledge poor”. KDD, i.e. knowledge discovery from data is hence, applied to extract interesting patterns from the dataset using different data mining techniques. This massive data available is essential for the extraction of useful information and generate relationships amongst the attributes.
2. By far, the observations reveal that Neural Networks performed well as compared to Naive Bayes and Decision Tree considering appropriate conditions.
3. Family history of heart disease can also be a reason for developing a heart disease .This data of the patient can also be included for further increasing the accuracy of the model.

DATA SOURCES

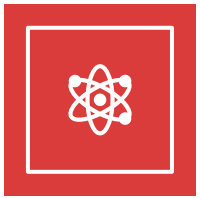


CHALLENGES ANTICIPATED



FORMULATING THE BEST MODEL ACCURACY

Following the existing research work, the accuracy of the model can be improved.

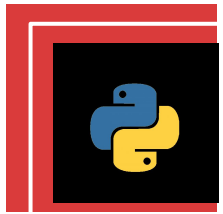


CREATING INTERACTIVE INTERFACE.

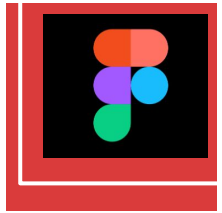
If the user fails to manage get all the test reports, creating a interactive environment for the patient to instruct him/her about the process, will be a hurdle.

HOPE WE PASS EACH HURDLE GRACEFULLY :)

TECH STACK

PYTHON 

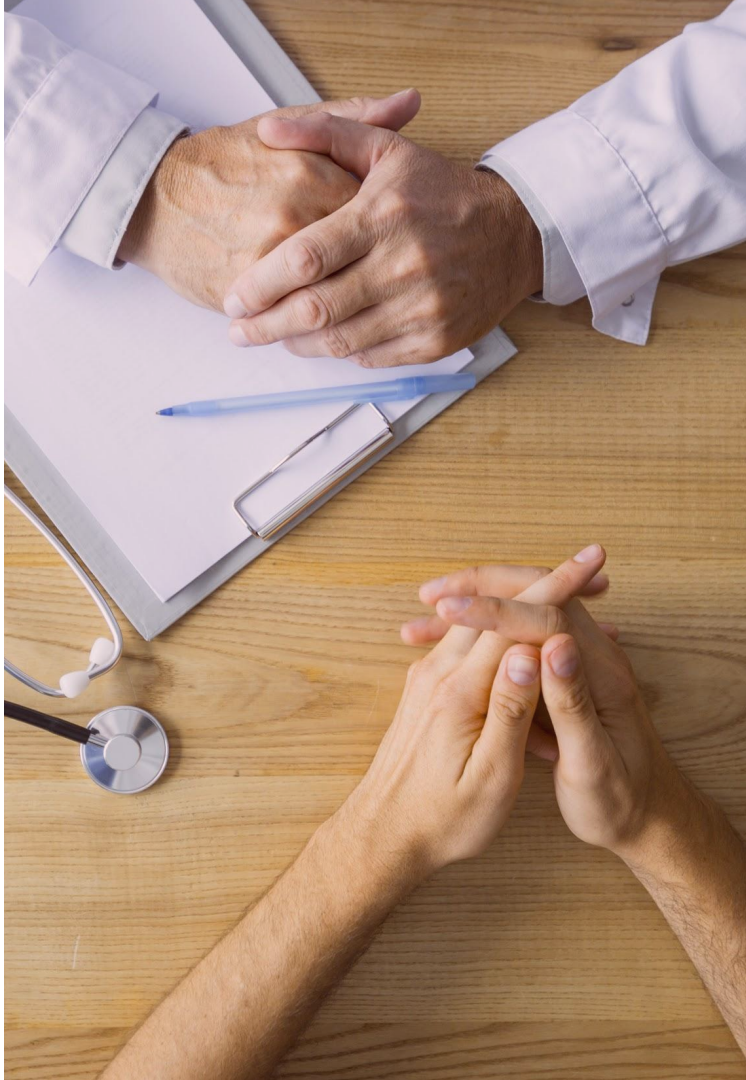
 ANDROID STUDIO



FIGMA

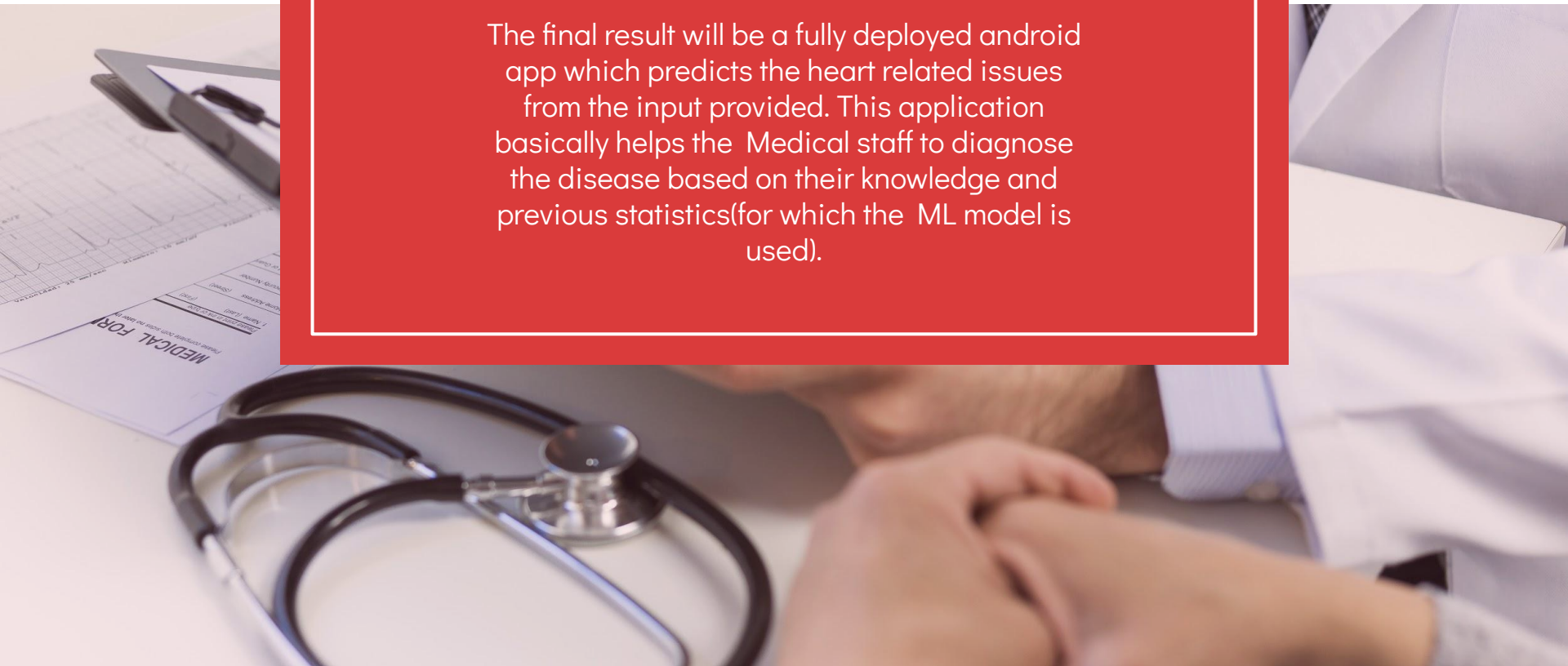
DISCUSSION SUMMARY

It is evident that the medical infrastructure in India needs a boost. But getting this boost in a hugely populated and enormous country like our's will take several years. But we cannot just wait for this to happen. We must try to get the best out of the resources available to us.

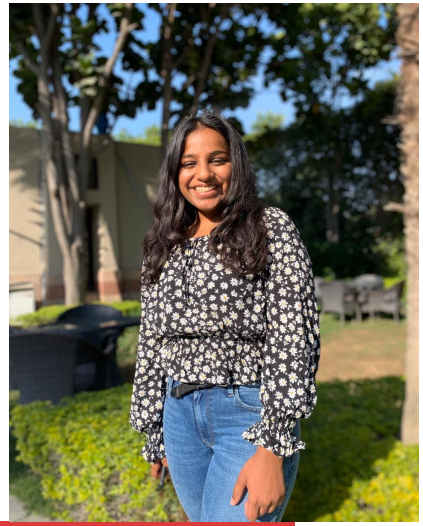


FINAL RESULTS

The final result will be a fully deployed android app which predicts the heart related issues from the input provided. This application basically helps the Medical staff to diagnose the disease based on their knowledge and previous statistics(for which the ML model is used).



OUR TEAM



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