



PREDICTION OF HEART DISEASE

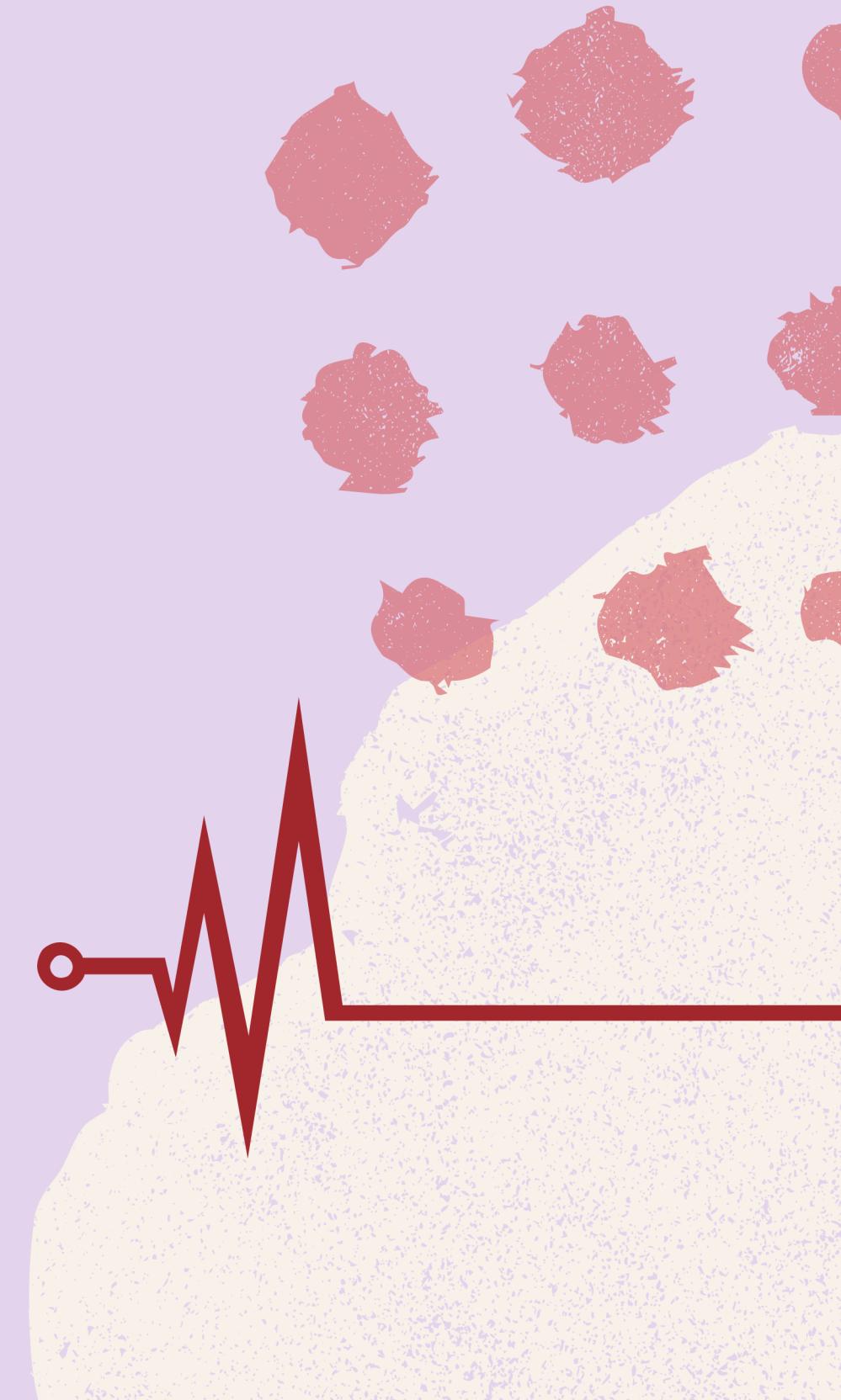


RATHIGA RAMESH



DATA SET – (KAGGLE)

- Age, Sex: Basic demographics that influence risk (e.g., males and older patients have higher risk).
- Cp (Chest Pain Type): Categorizes the severity and nature of chest pain.
- Trestbps, Chol: Blood pressure and cholesterol levels — key cardiovascular indicators.
- Fbs: High fasting blood sugar suggests diabetes, a heart disease risk factor.
- Restecg, Thalach, Exang: ECG readings, max heart rate, and exercise-induced angina assess heart function.
- Oldpeak, Slope, Ca, Thal: Indicators from stress tests and imaging to detect blocked arteries or blood flow issues.



CLEAR DATASET BEFORE AND AFTER REMOVE NULL

Remove “NAN”

```
# Checking for Null records  
dataset.isnull().sum()
```

```
age          0  
cp          0  
trestbps    4  
chol         1  
fbs          0  
restecg     0  
thalach      5  
exang        0  
oldpeak      0  
slope        0  
ca           0  
thal         0  
sex_male     0  
target_yes   0  
dtype: int64
```

```
# Checking for Null records  
dataset.isnull().sum()
```

```
age          0  
cp          0  
trestbps    0  
chol         0  
fbs          0  
restecg     0  
thalach      0  
exang        0  
oldpeak      0  
slope        0  
ca           0  
thal         0  
sex_male     0  
target_yes   0  
dtype: int64
```

MODEL TRAINING AND ALGORITHM

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```
#split into training set and test
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(indep, dep, test_size = 1/3)
```

#STANDARD SCALAR

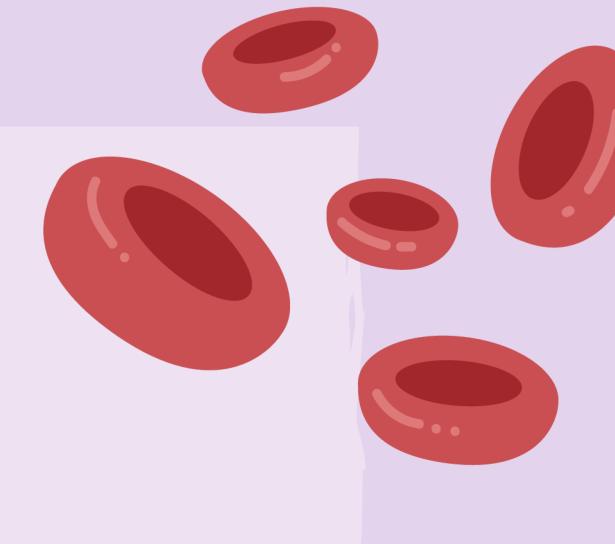
```
from sklearn.preprocessing import StandardScaler
from sklearn.svm import SVC
```

```
# Scale input features
sc_input = StandardScaler()
X_train = sc_input.fit_transform(X_train)
X_test = sc_input.transform(X_test)
```



```
from sklearn.linear_model import LogisticRegression
classifier=LogisticRegression(random_state=0)
classifier.fit(X_train, y_train) # -> good 0.82
```

▼ LogisticRegression
LogisticRegression(random_state=0)

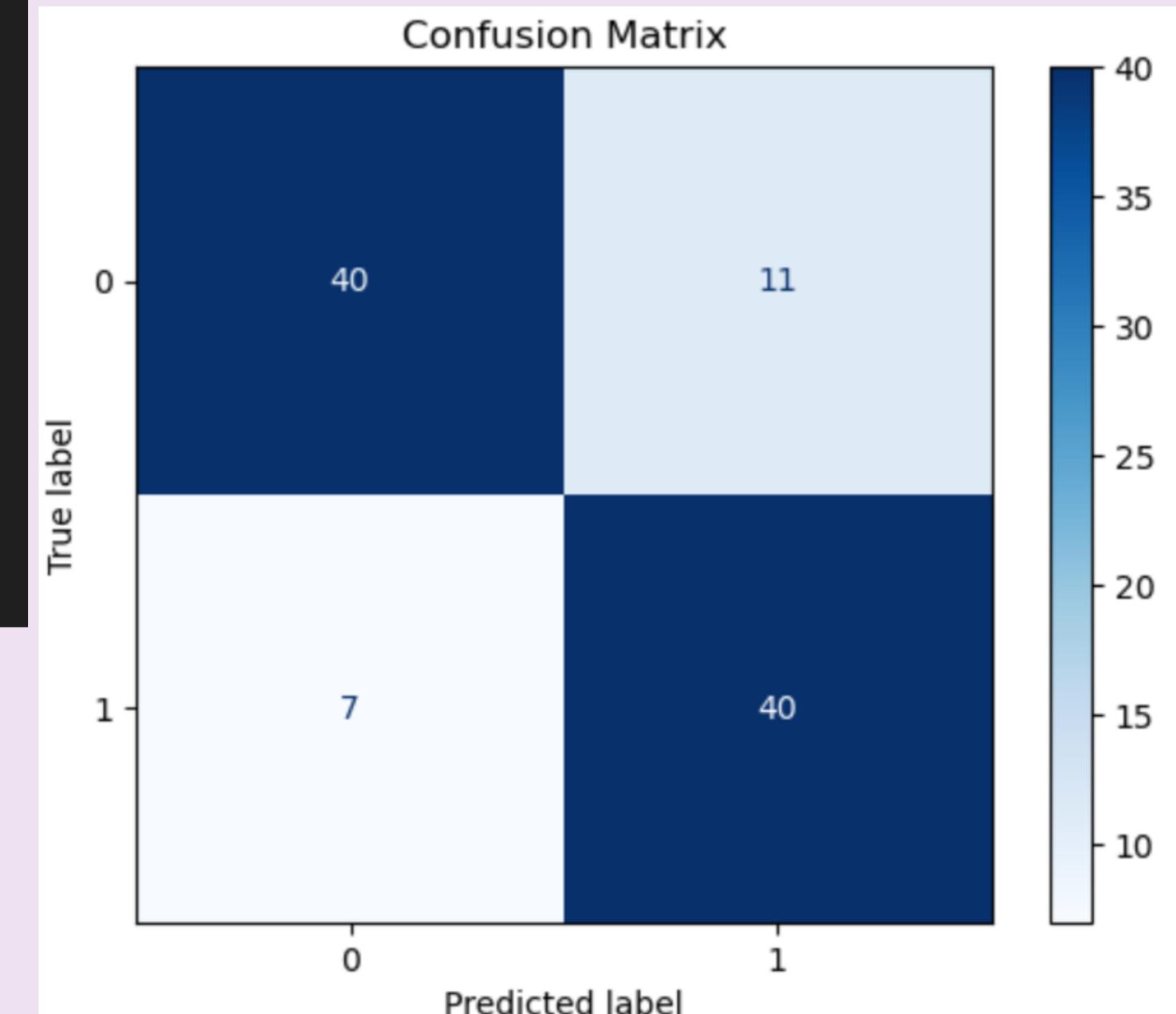
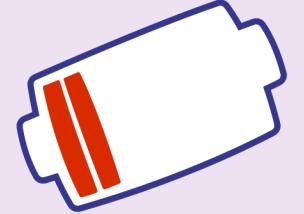


RESULT

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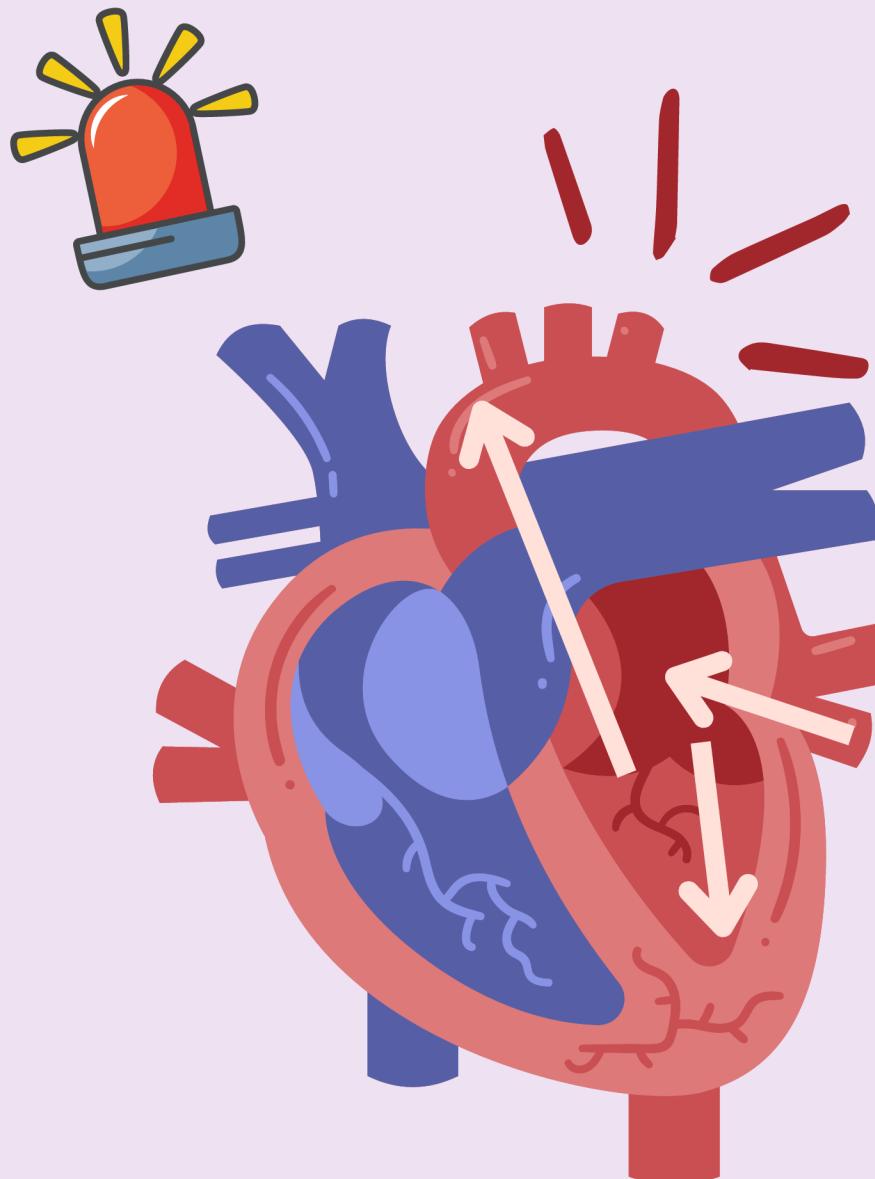
```
print(clf_report)
```

	precision	recall	f1-score	support
False	0.85	0.78	0.82	51
True	0.78	0.85	0.82	47
accuracy			0.82	98
macro avg	0.82	0.82	0.82	98
weighted avg	0.82	0.82	0.82	98



FINAL MODEL INTO WEB DEVELOPMENT

Using “DJANGO”



Final HKD Model

```
try:  
    # Convert to floats and check for invalid/missing inputs  
    input_values = []  
    for field in field_names:  
        val = request.POST.get(field, '').strip()  
        if val == '':  
            raise ValueError(f"Missing value for {field}")  
        input_values.append(float(val))  
  
    # Load trained model  
    filename = 'Rathiga_LogisticRegression_HKD.sav'  
    classifier = pickle.load(open(filename, 'rb'))  
  
    input_array = np.array(input_values).reshape(1, -1)  
  
    # Predict  
    out = classifier.predict(input_array)
```

VISUAL CODE IDE – MODEL, VIEWS, FORMS

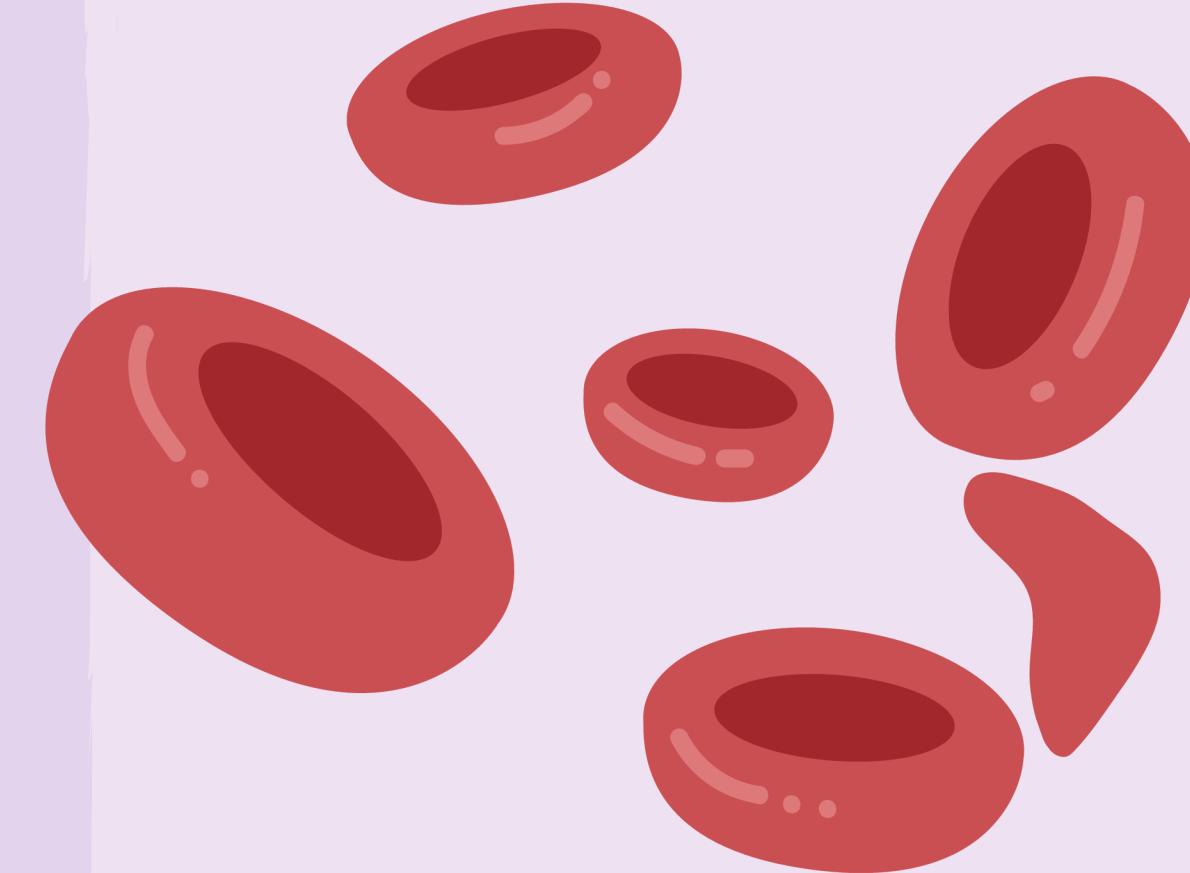
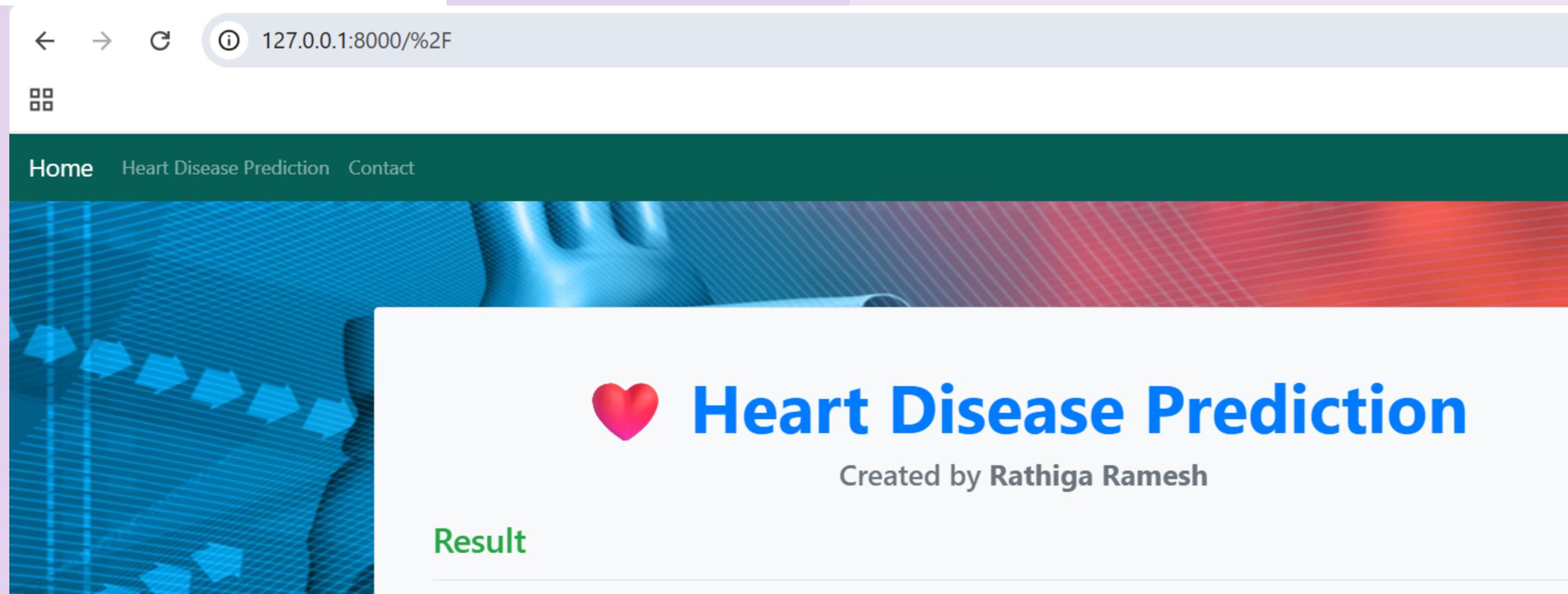
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Project URL

- Localhost URL: `http://127.0.0.1:8000/`
- This runs the Django development server locally to access your web app.

App Used: hkd

This is the main Django app where all logic is implemented.



LOCAL HOST (PYTHON MANAGE.PY)

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RUNSERVER

 Heart Disease Prediction

Please enter values in the respective fields below

Age*
44

Sex male
Male

Cp*
Type 0

Trestbps*
33

Chol*
33

Fbs*
True

Restecg*
Normal

Thalach*
33

Exang*
Yes

Oldpeak*
33

Slope*
Upsloping

Ca*
0

Thal*
Normal

[Get Result](#)

Heart Disease Prediction

Created by Rathiga Ramesh

Result

Age: 44.0

Sex: 1.0

Chest Pain: 0.0

Blood Pressure: 33.0

Cholesterol: 33.0

Blood Sugar: 1.0

ECG: 0.0

Heart Rate: 33.0

Exercise Angina: 1.0

Old Peak: 33.0

Slope: 0.0

Major Vessels: 0.0

Thalassemia: 1.0

 No symptoms of heart disease detected.  Negative

 [Go to HKD Prediction](#)

© RathigaRamesh

THANK YOU

