Heart Disease Detection

BIG DATA ANALYTICS

NAVTTC,FJWU – NEURON SOLUTIONS

INTERNSHIP PROJECT

Group Members

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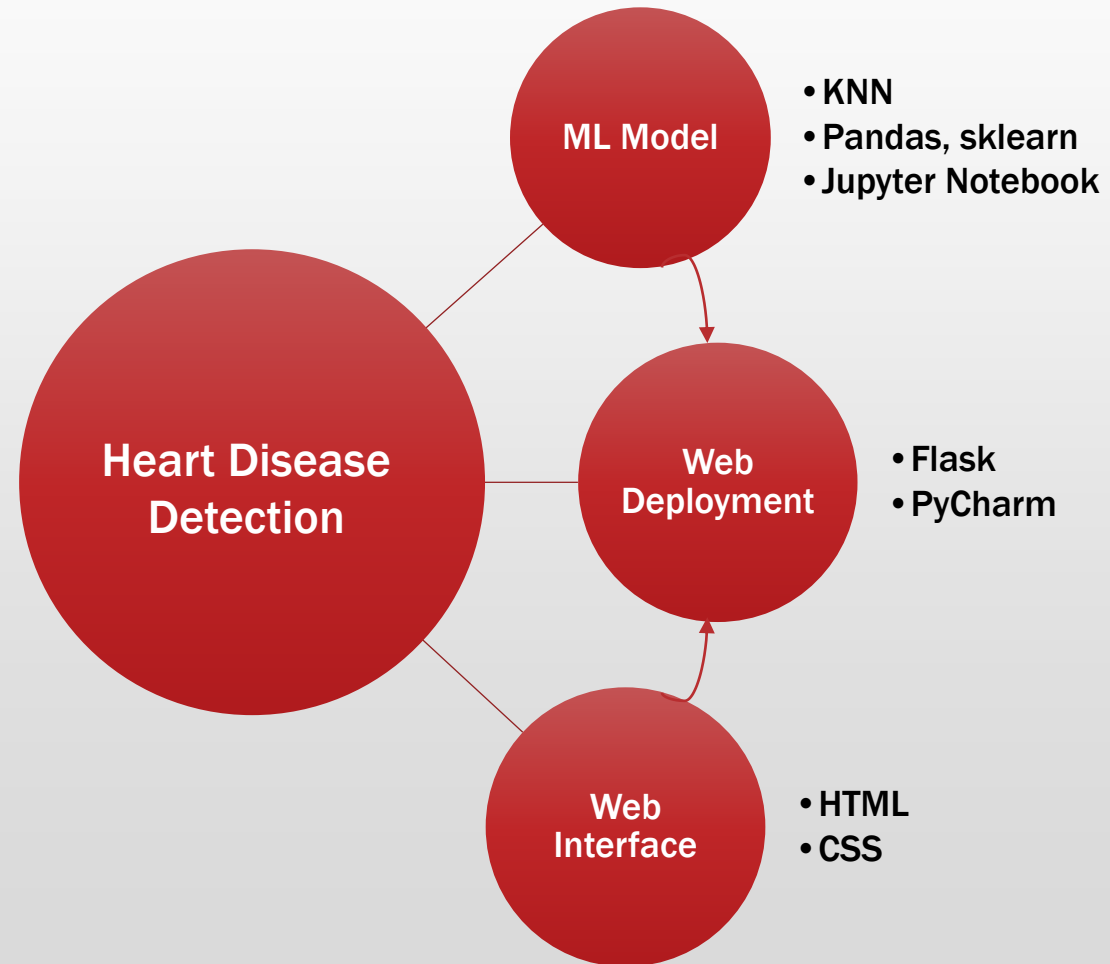- ♥ **Saba Yashfeen**

INTRODUCTION

- ♥ Several types of heart problems are referred to as Heart disease.

- ♥ By analyzing the data and classifying whether or not a person has heart disease using machine learning algorithm, this study aims to predict heart disease.

Algorithm Used

♥ We have applied several Machine Learning Algorithms on our Data.
  ♦ KNN, RF, SVM, NB

♥ Based on accuracy score, we have chosen KNN to further use as the prediction model.

Algorithm	Accuracy
KNN	97.55%
Random Forest	94.12%
Support Vector Machine	89.71%
Naïve Bayes	83.82%

Tools & Technologies

ML Model
- KNN
- Pandas, sklearn
- Jupyter Notebook

Heart Disease Detection

Web Deployment
- Flask
- PyCharm

Web Interface
- HTML
- CSS

Web Application

CVD App

127.0.0.1:5000/predict

Observable   BitDegree   Udemy   SimpliLearn   Courses - Great Lea...   Courses | Free Cour...   Project Manageme...   JetBrains Datalore:...   35+ Data Analysis P...   Call of Duty: Advan...

Heart Disease Detection App

Fill this Form.

Age

Gender
-- Select an Option --

Chest Pain Type
-- Select an Option --

Resting Blood Pressure in mm Hg

Serum Cholestoral in mg/dl

Fasting Blood Sugar > 120 mg/dl
-- Select an Option --

Resting ECG Results
-- Select an Option --

Maximum Heart Rate

Exercise Induced Angina
-- Select an Option --

ST Depression Induced

Slope of the Peak Exercise ST Segment
-- Select an Option --

Number of Vessels Colored by Flourosopy
-- Select an Option --

Thalassemia
-- Select an Option --

Submit

Heart disease - Unlikely

Heart Disease Prediction

```python
In [22]: ## Take input from user
         age = float(input("Enter Age: "))
         sex = float(input("Enter Gender (0,1): "))
         cp = float(input("Enter Chest pain type (0-3): "))
         trestbps = float(input("Enter Resting blood pressure: "))
         chol = float(input("Enter Serum cholesterol in mg/dl: "))
         fbs = float(input("Enter Fasting blood sugar > 120 mg/dl (0,1): "))
         restecg = float(input("Enter Resting electrocardiographic results (0-2): "))
         thalach = float(input("Enter Maximum heart rate: "))
         exang = float(input("Enter Exercise induced angina (0,1): "))
         oldpeak = float(input("Enter ST depression: "))
         slope = float(input("Enter Slope of peak exercise (0-2): "))
         ca = float(input("Enter Number of major vessels (0-3): "))
         thal = float(input("Enter thalesemia (0-3): "))

         Enter Age: 22
         Enter Gender (0,1): 1
         Enter Chest pain type (0-3): 3
         Enter Resting blood pressure: 120
         Enter Serum cholesterol in mg/dl: 150
         Enter Fasting blood sugar > 120 mg/dl (0,1): 1
         Enter Resting electrocardiographic results (0-2): 0
         Enter Maximum heart rate: 160
         Enter Exercise induced angina (0,1): 0
         Enter ST depression: 1.1
         Enter Slope of peak exercise (0-2): 0
         Enter Number of major vessels (0-3): 1
         Enter thalesemia (0-3): 0
```

```python
In [23]: result = model.predict([[age, sex, cp, trestbps, chol, fbs, restecg, thalach, exang, oldpeak, slope, ca, thal]])   # input must be

         for i in result:
             if i==0:
                 print("Heart Disease: No")
             elif i==1:
                 print("Heart Disease: Yes")

         Heart Disease: No
```

```python
In [24]: print(result)

         [0]
```

YouTube Video Link

HTTPS://YOUTU.BE/ULMCBN-8CSO

Thank You