HEART FAILURE PREDICTION USING PYTHON WEB FRAMEWORK

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Introduction

- Cardiovascular diseases (CVDs) are the number 1 cause of death globally, taking an estimated 17.9 million lives each year, which accounts for 31% of all deaths worldwide.
- Most cardiovascular diseases can be prevented by addressing behavioral risk factors such as tobacco use, unhealthy diet and obesity, physical inactivity, and harmful use of alcohol using population-wide strategies.
- People with cardiovascular disease or who are at high cardiovascular risk (due to the presence of one or more risk factors such as hypertension, diabetes, hyperlipidemia, or already established disease) need early detection and management wherein a machine learning model can be of great help.

Preliminaries

- Heart failure is a common event caused by CVDs and this dataset contains 12 features that can be used to predict mortality by heart failure.
- Attributes:
  1. Age
  2. Anaemia
  3. Creatinine_phosphokinase
  4. Diabetes
  5. Ejection_fraction
  6. High_blood_pressure
  7. Platelets
  8. Serum_creatinine
  9. Serum_sodium
  10. Sex
  11. Smoking   time
  12. Death_event

Modules

- Numpy
- Pandas
- Matplotlib
- Seaborn
- SkLearn
- Pickle

Framework

- Flask

Backend

- Flask

Front-end

- HTML
- CSS
- JavaScript

Conclusion

- Can be helpful to the people who are financially capable for the tests at the early stages
- We can detect early stage heart issues which can save more lives
- Can be implemented with regular health check up.