Heart Issue in the Society

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Problem Statement :

Heart Failure is when the heart muscle does not pump blood as well as it should to meet the body's demands.
Blood is the most important fluid that circulates throughout the body by supplying oxygen to all body parts.
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.
This constant threat of cardiovascular issues has risen due to poor lifestyle choices and an ignorant attitude towards health. With most people struggling with mental problems, habits like tobacco use, unhealthy diet and obesity, physical inactivity and harmful use of alcohol have been taken up by the mass population. Thus, people at high cardiovascular risk need early detection and management, wherein a machine learning model can be of great help!

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AIM

•To classify / predict whether a patient can encounter a death situation due to heart failure.
•It is a **binary classification** problem with multiple numerical and categorical features.

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Dataset Attributes

- **Age** : age [years]
- **anaemia** : Decrease of red blood cells or hemoglobin (boolean)
- **creatinine_phosphokinase** : Level of the CPK enzyme in the blood (mcg/L)
- **diabetes** : If the patient has diabetes (boolean)
- **ejection_fraction** : Percentage of blood leaving the heart at each contraction (percentage)
- **high_blood_pressure** : If the patient has hypertension (boolean)
- **platelets** : Platelets in the blood (kiloplatelets/mL)
- **serum_creatinine** : Level of serum creatinine in the blood (mg/dL)
- **serum_sodium** : Level of serum sodium in the blood (mEq/L)
- **sex** : Woman or man (binary)
- **smoking** : If the patient smokes or not (boolean)
- **time** : Follow-up period (days)
- **DEATH_EVENT** : If the patient deceased during the follow-up period (boolean)

All the Best