# Heart-Failure-Analysis--Machine-Learning

**Background**

Using the HeartFailure data, determine the factors that influence heart failure.

Dataset

This data is from the University of California Irvine machine learning dataset repository.

https://archive.ics.uci.edu/ml/datasets/Heart+failure+clinical+records

Data Fields

1.Age - age of the patient (years)

2.Anaemia- decrease of red blood cells or hemoglobin (boolean)

3.High blood pressure -if the patient has hypertension (boolean)

4.Creatinine phosphokinase (CPK): level of the CPK enzyme in the blood (mcg/L)

5.Diabetes -if the patient has diabetes (boolean)

6.Ejection fraction - percentage of blood leaving the heart at each contraction (percentage)

7.Platelets -platelets in the blood (kiloplatelets/mL)

8.Sex - woman or man (binary)

9.Serum creatinine -level of serum creatinine in the blood (mg/dL)

10.Serum sodium -level of serum sodium in the blood (mEq/L)

11.Smoking -if the patient smokes or not (boolean)

12.Time -follow-up period (days)

13.Death event - if the patient deceased during the follow-up period (boolean)

Data Values

Sex - Gender of patient Male = 1, Female =0

Age - Age of patient

Diabetes - 0 = No, 1 = Yes

Anaemia - 0 = No, 1 = Yes

High\_blood\_pressure - 0 = No, 1 = Yes

Smoking - 0 = No, 1 = Yes

DEATH\_EVENT - 0 = No, 1 = Yes

**We can see that people with high count of platelets are more likely to survive irrespective of their age**

![image](https://user-images.githubusercontent.com/100436462/221014927-9247847e-d223-43b7-83c4-921019b5a527.png)