

# DEPLOYMENT FINAL PROJECT 3

## MSIB Batch 3 Hacktiv8

### Heart Failure Prediction

Author: Ika Nurfitriani

#### A. Hasil app dari Final Project 3 (Tidak dilakukan deployment ke Heroku)

**Prediction of Death from Heart Failure:**

**Age**  
(Patient age)

Patient age

**Creatinine phosphokinase**  
(CPK enzyme levels)

In mcg/L

**Ejection fraction**  
(The percentage of blood leaving the heart in the percentage of each cardiac contraction)

In Percent

**Platelets**  
(The number of platelets in the blood)

In kiloplatelets/mL

**Serum creatinine**  
(serum creatinine level in blood)

In mg/dL

**Serum sodium**  
(Serum sodium level in blood)

In mEq/L

**Time**  
(Time of day for follow-up)

In day

**PREDICT NOW →**

**Prediction Result:**

**According To:**

Age:  
Creatinine phosphokinase:  
Ejection fraction:  
Platelets:  
Serum creatinine:  
Serum sodium:  
Time:

**About Us:**

Ervial Buana J  
Ika Nurfitriani  
Muhammad Reesa R

#### B. Prediksi menggunakan app yang sudah dibuat

1. Jika terdapat seorang pasien yang berumur 62 tahun dengan hasil pemeriksaan level enzim CPK = 61 mcg/L, presentase darah yang keluar dari jantung setiap kontraksi (ejection fraction) = 38 %, jumlah platelets dalam darah = 718 kiloplatelets/mL, level serum creatinine = 1.3 mg/dL, level serum sodium = 137 mEq/L dan pasien telah menjalani kontrol untuk follow up kondisi selama 270 hari. Apakah pasien ini memiliki risiko kematian akibat penyakit jantung?

**Prediction of Death from Heart Failure:**

**Age**  
(Patient age)

Patient age

**Creatinine phosphokinase**  
(CPK enzyme levels)

In mcg/L

**Ejection fraction**  
(The percentage of blood leaving the heart in the percentage of each cardiac contraction)

In Percent

**Platelets**  
(The number of platelets in the blood)

In kiloplatelets/mL

**Serum creatinine**

**Prediction Result:**

**The patient is not expected to die**

**According To:**

Age: 62.0  
Creatinine phosphokinase: 61.0  
Ejection fraction: 38.0  
Platelets: 718.0  
Serum creatinine: 1.3  
Serum sodium: 137.0  
Time: 270.0

### Kesimpulan:

Ternyata hasil prediksi menggunakan data di atas ialah pasien tidak memiliki risiko kematian akibat penyakit jantung.

2. Jika terdapat seorang pasien yang berumur 50 tahun dengan hasil pemeriksaan level enzim CPK = 111 mcg/L, presentase darah yang keluar dari jantung setiap kontraksi (ejection fraction) = 20 %, jumlah platelets dalam darah = 945 kiloplatelets/mL, level serum creatinine = 1.8 mg/dL, level serum sodium = 139 mEq/L dan pasien telah menjalani kontrol untuk follow up kondisi selama 8 hari. Apakah pasien ini memiliki risiko kematian akibat penyakit jantung?

**Prediction of Death from Heart Failure:**

**Age**  
(Patient age)

Patient age

**Creatinine phosphokinase**  
(CPK enzyme levels)

In mcg/L

**Ejection fraction**  
(The percentage of blood leaving the heart in the percentage of each cardiac contraction)

In Percent

**Platelets**  
(The number of platelets in the blood)

In kiloplatelets/mL

**Serum creatinine**

**Prediction Result:**

**The patient is expected to die**

**According To:**

Age: 50.0  
Creatinine phosphokinase: 111.0  
Ejection fraction: 20.0  
Platelets: 945.0  
Serum creatinine: 1.8  
Serum sodium: 139.0  
Time: 8.0

### Kesimpulan:

Ternyata hasil prediksi menggunakan data di atas ialah pasien memiliki risiko kematian akibat penyakit jantung.

3. Jika terdapat seorang pasien yang berumur 60 tahun dengan hasil pemeriksaan level enzim CPK = 81 mcg/L, presentase darah yang keluar dari jantung setiap kontraksi (ejection fraction) = 38 %, jumlah platelets dalam darah = 718 kiloplatelets/mL, level

serum creatinine = 1.5 mg/dL, level serum sodium = 138 mEq/L dan pasien telah menjalani kontrol untuk follow up kondisi selama 268 hari. Apakah pasien ini memiliki risiko kematian akibat penyakit jantung?

The screenshot shows a web application titled "Heart Failure Prediction App". The left panel, titled "Prediction of Death from Heart Failure:", contains input fields for "Age (Patient age)", "Creatinine phosphokinase (CPK enzyme levels) In mcg/L", "Ejection fraction (The percentage of blood leaving the heart in the percentage of each cardiac contraction) In Percent", "Platelets (The number of platelets in the blood) In kiloplatelets/mL", and "Serum creatinine". The right panel, titled "Prediction Result:", displays the output: "The patient is not expected to die". Below this, it lists the input data used for the prediction: "According To: Age: 60.0, Creatinine phosphokinase: 81.0, Ejection fraction: 38.0, Platelets: 718.0, Serum creatinine: 1.5, Serum sodium: 138.0, Time: 268.0".

#### Kesimpulan:

Ternyata hasil prediksi menggunakan data di atas ialah pasien memiliki tidak risiko kematian akibat penyakit jantung.

4. Jika terdapat seorang pasien yang berumur 42 tahun dengan hasil pemeriksaan level enzim CPK = 128 mcg/L, presentase darah yang keluar dari jantung setiap kontraksi (ejection fraction) = 22 %, jumlah platelets dalam darah = 984 kiloplatelets/mL, level serum creatinine = 2.0 mg/dL, level serum sodium = 152 mEq/L dan pasien telah menjalani kontrol untuk follow up kondisi selama 5 hari. Apakah pasien ini memiliki risiko kematian akibat penyakit jantung?

The screenshot shows the same web application as before, but with different input data. The left panel shows "Age" as 42, "Creatinine phosphokinase" as 128 mcg/L, "Ejection fraction" as 22%, "Platelets" as 984 kiloplatelets/mL, and "Serum creatinine" as 2.0. The right panel displays the prediction result: "The patient is expected to die". The input data listed below is: "According To: Age: 42.0, Creatinine phosphokinase: 128.0, Ejection fraction: 22.0, Platelets: 984.0, Serum creatinine: 2.0, Serum sodium: 152.0, Time: 5.0".

#### Kesimpulan:

Ternyata hasil prediksi menggunakan data di atas ialah pasien memiliki risiko kematian akibat penyakit jantung.