

ABSTRACT

Acute Myocardial Infarction is often interpreted as an acute heart attack or death of heart muscle tissue is heart disease caused by the presence of acute obstruction on Coronary Artery. Acute blockage occurs because of lesions in the form of fatty plaque on the wall of Coronary Artery, thus blocking blood flow to heart muscle tissue. Patients with Acute Myocardial Infarction (AMI) should be handled to prevent the occurrence of myocardial infarction or death of heart muscle that is increasingly widespread. One of the main techniques in diagnosing heart disease is based on the signal recording electrocardiogram (ECG) so that it can be concluded quickly how much the death of heart muscle that occurs. This is important so that can be handled sooner with the selection of an appropriate treatment to each level and area of heart muscle death that occurred.

In this Final Project a method of feature extraction using empirical Mode Decomposition (EMD). EMD has a way of working which describes the original signal into two parts, namely the Independent Intrinsic Mode Function (IMFs) and the remaining components. Process is calculated by subtracting the number of signals were observed with a mean (average) of the amount of the signal. Calculation steps are repeated until the obtained conditions for a stable signal. For the classification method using Aldrich score because it has Theoretical parameters Memory Occupation (TMO) or placement of a low memory and Computational Complexity (CC) is simple so that calculations can be faster.

The end result of this final project is a program that can detect a person's heart condition based on signals generated by the ECG is processed using the method of EMD and Aldrich Score. Heart conditions were divided into 2 of AMI (anterior or inferior) and non-AMI together with the percentage of deaths that occur in heart muscle. The best recognition rate is tested in lead 2 on the IMF 2 with CC between 15 s / d 24 operations, TMO between 11 s / d 17 bytes with a processing time 8.1239 s / d 17.5696 seconds. Therefore, this method is sufficiently representative to recognize the ECG signals are tested.

Key words : *Acute Myocardial Infarction (AMI), Aldrich Score Method, Theoretical Memory Occupation (TMO), Complexity Computational (CC), Empirical Mode Decomposition (EMD).*