

Analysis of Electrocardiogram Based on ARMAX Model Approach

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Abstract

The auto-regressive exogenous input moving average (ARMAX) model is proposed to approximate and to predict the normal electrocardiogram (ECG) in the paper. The most important X part of the ARMAX is consisted of three major components, such as the right tricuspid valve, the interventricular septum, and the aortic valve. The minimum square error (MSE) criterion has been implemented to estimate the coefficients of the ARMAX. The J junction can be clearly observed from the results of the MSE criterion. We hope that the proposed ARMAX model can offer a new approach to diagnose the potential heart defects in the future.

Keyword : ARMAX; ECG