

Abstract

Coronary heart disease is a narrowing or blockage of arteries that supply blood to the heart, it is caused by accumulation of fat deposits in artery walls for years. Auscultation technique is an old technique used by doctors to listen to heart sounds. But the amplitude and frequency of the heart's sound is so small that it is difficult to hear where doctors who have different experiences and sensitivities can cause errors in diagnosing. To overcome this, this thesis research proposes to design data processing using 2 different methods, namely: 1. Discrete Wavelet Transform (DWT) and, 2. Fourier Discrete Transform (FDT), with each extraction feature, namely: 1. Mean, Standard Deviation, Kurtosis and Skewness and feature selection using Wrapper method, 2. Power Spectral Entropy which will later be input for classification using KNN. A good F1-Score is found in scenario 2 in the aortic valve with $k = 3$ at 74.6%.

Keywords: PJK, *DWT*, *FDT*