



Android Application for Detection and Localization of Epicardial Fat using Morphological Filters

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Abstract : Today cardiovascular disease is the leading cause of death in the world wide. More than 62 million Americans have some form of cardiovascular disease. Together they resulted in 17.3 million deaths (31.5%) in 2013 up from 12.3 million (25.8%) in 1990. The socio-economic impact is considerable it has been predicted that approximately 23.6 million people will die from CVD in 2030. In existing method various techniques used to detect the cardiovascular disease are echocardiogram, cardiac stress test, CT and MRI scans. These are used but the produced images are less information and cardiologist spend more time to predict and to make the decision. The cardiac fats are correlated to several cardiovascular risk factors. The quantifying of fat couldn't be found out manually, therefore the different type of image processing technique will be applied to the low resolution image. In this paper, the quality of the image is pre-processed by using FCM algorithm and get a high resolution image is segmented, the PCA feature with BPNN and FIS classifier gives the better accuracy in classifying normal and abnormal conditions of the epicardial, then the image is given to the PIC microcontroller, with the help of Bluetooth driver the information will be displayed on the LCD. And also the images are displayed on the doctor's mobile phone with the help of mobile apps by using Wi-Fi connection.

Keywords : CT-Computed Tomography, PCA-principal Component Analysis, BPNN-Back Propagation Neural Network and FIS-Fuzzy Inference System Classifier, Epicardial Fat

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