

A Proficient Evaluation with the Pre-Term Birth Classification in ECG Signal Using KNN

In this work, preterm birth is classified using KNN algorithm with ECG signals. The rate of premature births is rising all over the world and there is still no forecast against the births. Recent research is based on ECG record analysis, which contains information on the Electrophysiological properties of the mother's and fetal's cardiac signals. The purpose of this work is to classify the fetal ECG heartbeats, using the KNN classifier, and to predict preterm birth. 50 ECG signals were taken in this work, it is preprocessed using the FIR and NLMS filters. Using FFT the function was extracted based on the pre-processed signals. Classification of the signals with the extracted features is unclear. So, the classification is done by using the Classification Learner app from the MATLAB software. In addition, identify the ECG signals according to the qualified features, selected features and target value. ECG signals were marked as a term or premature. Keywords: Preterm, ECG signals, FIR, NLMS, FFT, KNN.

Domain: Artificial Intelligence / Artificial Neural Network

Technology: MATLAB