

Abstract

A crackle sound on lung happen because there's a anomaly on respiratory tract. Crackle sound like a rattling or clicking that happen to be heard when inhaling or exhaling or both phase of breathing. Ascultate is method that use to evaluate abnormalities inside respiratory tract but this method are still a subjective method. There's a lot of research that using this problem as its goal with using a different kind of method like using features extraction method, one of those is Discrete Wavelet Transform(DWT). Using Wavelet Transform help to separate the crackle feature from lung sound and using a classification to classify it characteristic. the method is easy to use on wave form of data and it used on this final project. The extracted features classify and tested using Restricted Boltzmann Machine(RBM) which resulting 69% as highest accuracy result.

Keywords: lung sound, features extraction, RBM, DWT, crackle.