

ABSTRACT

Emotions are a way for humans to interact with one another. Emotions are complex reactions that bring about changes in human beings. These changes can be seen from the look on the face, changes in voice, or aggressive behavior that can endanger others or yourself.

In this study, the author will use the Particle Swarm Optimization (PSO) method where the emotion of human speech through speech signals uses the extraction of Linear Predictive Coding (LPC), which will later be a state that can be used by the Particle Swarm Optimization (PSO) method. In the speech signal classification, through the analysis of the frequency of human speech, a person belongs to the normal, risk or high level. The method used by Particle Swarm Optimization (PSO), the selection of the method is to find parameters that produce a minimum value or continuous equation. PSO is seeking global optima continuously to get prospective solutions using quality references. This algorithm optimizes the problem by moving the particles in the problem space to the position and speed of the particles. This set of particles is called a swarm, which will move forward to the best solution.

The purpose of this study is to classify emotions in humans. In this classification, it is expected that the output can help the world of psychology and provide further research references in the field of human speech emotions. Emotions that will be classified are happy, angry, sad and shocked. The accuracy obtained in this study was 75%.

Keywords: Speech, Linear Predictive Coding (LPC), Particle swarm optimization.