

ABSTRACT

Sound is a means for each individual to communicate. Each individual has a different sound classification that can be used as an identity. Sound or sound has the meaning of a longitudinal wave type that propagates and is produced by vibrating objects. Besides being used as an identity, voice can also be used to identify a person's teeth. Namely by using speech processing. Speech processing is the process of taking the desired information from a voice signal.

In this final project, the first phase of the four stages of the study of reversible pulpitis in the barodontalgia phenomenon with divers as an object has been investigated, which is to detect the sound of reversible pulpitis. Reversible pulpitis is mild pulp inflammation where if the cause is removed, the inflammation is gone and the pulp has returned to normal. Whereas barodontalgia is a phenomenon of toothache caused by changes in air pressure. In this study an analysis of the speech signal from a diver has been carried out, from the audio characteristics obtained has been continued with a classification process that is expected to produce information about the health of pulpitis reversible.

This final project aims to identify differences in the voices of people suffering from reversible pulpitis and the sound of healthy people using the Linear Predictive Coding (LPC) method and K-Nearest Neighbor (K-NN) classification using Matrix Laboratory (MATLAB) and get an accuracy of 93, 33% use overlapping, order LPC 16, mean, and rule of cosine distance..

Keywords: *Voice, Speech, Barodontalgia, Pulpitis, LPC, K-NN*