ABSTRACT

Today, many activities can cause pain in the spine. Many things can be pain in the spine. One is a spinal curvature, namely scoliosis. Scoliosis is a disorder of the spine so the spine curves to the left or right side. Usually this scoliosis is detected when the patient performs an X-ray examination or other medical device during MCU.This Final Project aims to build a system capable of detecting spinal cord in humans with X-rays. The construction of this system is expected to help the process of measuring rough angles of the back spine quickly and accurately.

In this final project used method using Matched Filter and Morphology Operation method. There are two main steps in the corner computation process. The first step is to do preprocessing which aims to improve image quality in order to be segmented optimally. In order to achieve the best accuracy, the test variables studied are mostly on preprocessing because the image is the image of X-rays, so it takes the best variable to be the maximum input in the next process.

In this research, accuracy using Matched Filter is 62,67%, while for Operation Morphology method is 70,76%, and for method of combination 72,44%.

Keywords: Backbone, Image Detection, Angle Calculation