ABSTRACT

One of the abnormalities in the spine that occurs is due to the slope in the spine so that the normal bone or commonly called scoliosis. Scoliosis is the spine towards the side so that the spine forms letters "S" or "C". In this study, a system will be made that can classify the spine based on image processing of the spine into three types of spine with normal conditions, the spine with deformrocoliosis or spinal abnormalities with levoskoliosis abnormalities.

In this Final Project will use the method of Local Binnary Patterns (LBP) and K-Nearest Neighbor (KNN) Algorithm as the classification. One of the most important properties of the LBP operator is the simplicity of its calculations, has a faster calculation of time, and is invariably the photometric change of the same object, because LBP is the appropriate size Poses this test, carried out testing with 135 images of the spine, with the composition of each image class having 45 normal images, 45 images of decstroscholiosis, and 45 image levoskoliosis.

Test Results Obtained from 65% results. This accuracy is obtained from testing using radius level parameters with a value of 2, the first-order feature used is the characteristic var, std, and means that the feature extraction method is K = 1 and euclidean distance is required.

***Keyword*:** *Spine*, *Local Binnary Patterns (LBP)*, *K-Nearest Neighbor (K-NN)*.