

## **ABSTRACT**

*Scoliosis bone is a bone abnormality that is often underestimated, because to find out the bone abnormalities the patient must do a roentgen examination. Scoliosis is a spine disorder that causes the spine to experience curvature so that the position of the spine is not in its normal shape. In this research, researcher will build a system that can detect exact degree of bone bending in human spinal abnormalities with roentgen results in \*jpg format.*

*In this Final Project the Gray Level Coocurent Matrix (GLCM) and Learning Vector Quantization (LVQ) methods are used. Gray Level Coocurent Matrix which is a method of analyzing character traits based on gray level on statistics. The classification process uses the Learning Vector Quantization (LVQ) method with purpose to classify the image based on its angle. With the selection of methods and performance analysis in this study, the system is able to classify outputs such as normal backbone, dextroscoliosis abnormalities, levoscoliosis abnormalities and also know the degree of bending. Using 121 input images with the composition of division in the class, namely 31 images of dictroscoliosis bone, 38 images of levoscoliosis bone, 52 images of normal bone.*

**Keyword:** *Spine, Grey Level Coocurent Matrix, Learning Vector Quantization.*