## **ABSTRACT**

Human bones are one member of the body that is very important for humans, so damage to the bones is very influential on the state of the human body. One type of defect / damage to the bone that is often found is a fracture. A fracture is a condition where a bone has cracked or broken. Because of the location of the bones inside the body, it is necessary to do a 2D X-ray to see the condition of the bones. But at this time, the Hospital still uses the manual method to see the bones experiencing growth by attaching the results of 2D x-rays in a glowing background. So in this final task, a post-crack bone growth quantification system based on VOI was designed to estimate bone growth. The method used for the bone growth quantification system is Simple Linear Regression. The output of this final project is a graph of bone growth and estimation of total healing and estimated remaining healing time.

Keywords : Bone Fracture, Estimation, Simple Linear Regression Method