

## **ABSTRACT**

The heart is one important organ in the human body. One function of the heart is to pump blood throughout the body, by making application that can calculate a person's pulse rate can help determine the health level itself independently and earlier when there are abnormalities of the heart. But to know the number of pulses it is needed an electrocardiograph tool, namely the representation of the characteristics of cardiac signals generated by the electrical activity of the heart muscle.

This application uses the method Rolling Average Filter on the pulse detecting process and utilizing photoplethysmograph technology, which is a method of measuring a magnitude based on changes in intensity between the maximum value of the red color of the fingertip being placed on the photo sensor (camera of Smartphone) can be defined as a pulse. The application of pulse counter can be an alternative to replace the medical devices usually used by doctors, this application utilizes the camera and flash lamp being embedded in Smartphone. The platform used is specific for the users of android operating system because of its ease and many users of this operating system.

**Keywords:** counting the heartbeat, EKG (electrocardiograph), photoplethysmograph, Rolling Average, Heart.