

## **Abstract**

**Face detection is one of the main subjects in the field of computer science. In this modern age where computer is incorporated into nearly everything, face detection is a highly important topic to be researched, knowing its potential in many aspects such as security department. Researchers have been using different approach such as Haar-Cascade classifier algorithm to develop and improve existing face detection methods. Face detection is a process in which a computer learns to be able to detect and recognize human face. The algorithms are usually trained using image data that has pre-designed points that pinpoints the imagery of eyes, nose, and mouth of the subjects in the images. The algorithm YOLO has been modified and trained as such that it is able to recognize human face and which will then be compared with haar-cascade classifier based on their performance, regarding speed and accuracy by using a Raspberry Pi 3 and a USB webcam ran in a web-based operating system called MotionEyeOS on a laptop for the video capture. The result concluded that Haar-cascade classifier processed each frame faster and YOLO have higher detection accuracy.**

**Keywords: face detection, raspberry pi, yolo, haar-cascade classifier**