

ABSTRACT

Nowadays more and more computer vision utilized in the field of robotics and biometrics. One of the first steps to get started is a robot capable of recognizing faces. Required a reliable method that can accelerate the process of computation and can be realized on a conventional computer.

At this final task, it had developed a face detection system using Haar Classifier. The method is quite reliable but does not require complex computational techniques. The face is detected from color image sequences are captured using a webcam. All video files are processed as a color image of size 640 x 480 pixels using the programming language Visual C++ and OpenCV library includes functions. servo motor can be set spinning to the right-left and top-down to move the camera follows the detected face.

The system is implemented and tested on a PC Windows 7 Ultimate 32bit SP1 with Intel Core2 Duo T5870 processor and 2 GB of memory as the brain. ATmega8 microcontroller is used. Video files captured using Logitech webcam Pro C120 2 MP at 30 frames per second. With the effective distance between the face with a webcam 20-240 cm and with uneven lighting, the system can work optimally with an average of 100% successful trials.

Keywords: OpenCV, Haar Classifier, C++, ATmega8, Motor Servo