**Real Time Face Detection and Tracking**

**ABSTRACT**

 This paper describes the technique for real time human face detection and tracking using a modified version of the algorithm suggested using **Haar** Classifiers. Human face detection and tracking, followed by apprehension of the. Viola jones algorithm was based on object detection by extracting some specific features from the image. We are going to use the same approach for real time human face detection and tracking.  It is a machine learning based approach where a cascade function is trained from a lot of positive and negative images. It is then used to detect objects in other images.

**Existing Work:**

In the existing system, the concept was implemented on a MATLAB environment, which has all the predefined libraries of the image processing, no algorithm was designed and also very complex to use in real time environments.

**Proposed Work:**

 The proposed work will be done on a real time embedded board, based on ARM 11 architecture and using open source Image processing libraries, will design a portable human face tracking system. Such that the human face will be detected at any location in front of the USB camera and track its moments live.

**BLOCK DIAGRAM**

5V DC

Supply

ARM11

USB CAMERA

**Hardware:**

ARM11, USB Camera, Power supply.

**Software:**

**OS:** Embedded Linux, **Language:** C/ C++, **IDE:** Qt Creator, Opencv Image Processing

**Applications:**

Home and Office Environments for human face tracking.

**Advantages:**

* Low Cost of Implementation
* High Accuracy
* Can be Utilized for security surveillance