

## ABSTRACT

CCTV camera with face recognition feature is a camera who integrated with image processing system to recognize face on images captured by the camera. The image will be captured frame by frame from a webcam Logitech C525 HD. The results of image processing will be compared with image data which contained in the database. This is intended to monitor the security system at home. Images as an input will be processed in the computer using Matlab software. Face recognition technique used in this final project is Principal Component Analysis (PCA) method in performing feature extraction process and using Artificial Neural Network (ANN) in classification of feature extraction results. The results of the classification process will be used to provide a notification/alarm to the homeowner if there are strangers trespassing the home area. Warnings sign will be delivered via UTP cable (Ethernet) to homeowners on a computer device. Implementation of security monitoring system using a camera with face recognition feature is expected to minimize crimes of ownership in the area of houses and offices.

**Key words :** *CCTV, Face Recognition, PCA, ANN*