B. Tech Final Year Mini Project (2018 Batch)

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PROJECT DOMAIN: EMBEDDED SYSTEM

Title of the Mini Project:

Face recognition system on Raspberry Pi

ABSTRACT:

Real time human identification systems are important for security, surveillance and biometric applications. Usually it is desirable to detect, track and recognize persons in public areas such as airports, shopping centres, in areas with restricted access such as private offices, houses etc. Human identification can be performed by analysing its biometric information, such as fingerprints, face, iris, palm prints, palm veins etc. However, for fast and convenient person recognition, still the most suitable biometric parameter is facial information.

Identification of humans by using facial biometrics is still challenging task, due to the variable illumination, changing facial expressions according to mood changes, head orientation and pose. Over the years, various face detection algorithms have been developed. Some face recognition methods analyse the geometric features of facial images, such as location and distance between nose, eyes, and mouth. However, these methods are sensitive to the changes in illumination and facial expression. Because of this drawback, most of the face recognition systems try to extract some holistic features from the original face images for matching. By using holistic methods face is recognized using descriptions based on the entire image rather than on local features of the face. Many subspace learning based holistic feature extraction methods have been , including Eigenfaces, Fisherfaces, and others. holistic method called local binary pattern (LBP). In this we propose an embedded face recognition system that can be used to detect human faces and reveal they names

Key words: Raspberry pi ,OpenCV, Haaar Cascade classifier,

References:

[1] A real-time face detection and recognition system ,IEEE 2012 2nd International Conference on Consumer Electronics, Communications and Networks (CECNet)

[2] www.hackster.io

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