A Multimodal Approach to Improve the Performance of Biometric System

Authors : Chander Kant, Arun Kumar

Abstract : Biometric systems automatically recognize an individual based on his/her physiological and behavioral characteristics. There are also some traits like weight, age, height etc. that may not provide reliable user recognition because of there common and temporary nature. These traits are called soft bio metric traits. Although soft bio metric traits are lack of permanence to uniquely and reliably identify an individual, yet they provide some beneficial evidence about the user identity and may improve the system performance. Here in this paper, we have proposed an approach for integrating the soft bio metrics with fingerprint and face to improve the performance of personal authentication system. In our approach we have proposed a combined architecture of three different sensors to elevate the system performance. The approach includes, soft bio metrics, fingerprint and face traits. We have also proven the efficiency of proposed system regarding FAR (False Acceptance Ratio) and total response time, with the help of MUBI (Multimodal Bio metrics Integration) software.

Keywords : FAR, minutiae point, multimodal bio metrics, primary bio metric, soft bio metric

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