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Abstract

User Profiling in Online Social Network (OSN) requires the frontal photographs of the users as their Profile Pictures in Multi-Social Networking. The existing algorithms are ineffective in detecting the facial features like eyes, mouth and nose on the face appropriately, making it inefficient. This work proposes a novel approach to efficiently detect the facial features and improve the effectiveness of face detection and recognition by bifurcating the detected face horizontally, vertically and cropping it. The algorithm is effectively run only on the portion of the detected face Bounded Box (BB) and area to generate bounded boxes of other facial objects and later the Euclidian Distance (ED) between those BBs with respect to that of the face is computed to get Logarithm of Determinant of Euclidian Distance Matrix (LDEDM) in Relative-Distance (RD) method and stored in the database. The LDEDM so computed is unique for every user under consideration and is further utilized for identity matching recognizing from the database. The results show that the Equal Error Rate (EER) is considerably low indicating accurate threshold fixation for better performance with the proposed Relative Distance based User Profiling from Profile Picture (RDUP3) algorithm.

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Index Terms

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Keywords

Data Mining, Face Detection, Online Social Networks, Profile Picture, Relative Distance, User Profiling