

Abstract Submitted
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Evaluation of the optical flow methods on facial expression classification MOHAMMAD HAGHIGHAT, Univ of Miami, MASOUD AMIRKABIRI RAZIAN, Univ of Tabriz — Facial expression recognition is an important issue in modern human computer interaction (HCI). In this work, the performance of optical flow in tracking facial characteristic points (FCPs) is examined and it is used as an application of facial expression classification. FCPs are extracted using active appearance model (AAM), and the features selected to the classification are the perceived movements of the FCPs and the changes in geometric distance between them. This work compares four different optical flow methods on FCP tracking: normalized cross-correlation, Lucas-Kanade, Brox, and Liu-Freeman. Nearest neighborhood rule is used for the classification. Evaluations are done on the Cohn-Kanade (CK+) database for five prototypic expressions. Experimental results show that Lucas-Kanade method outperforms the other three optical flow methods. This has been assessed based on ground truth established in CK+ database.

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