Abstract

This work develops a framework for recognition of two hand dynamic gestures, using condensation algorithm. The work is broadly divided into three parts. First part of this work deals with skin color identification using color segmentation using 'Gaussian Mixture Model'. In the Second part hand motions are modeled as trajectories of some estimated parameters over time. During training, one template trajectory and one prototype feature vector are generated for every gesture class. Features used in this work include some static and dynamic motion trajectory features. The third part of this algorithm is to recognize the input gesture. Random sampling techniques with 'Condensation Algorithm' are used for incrementally comparing and matching the trajectory models to the input gesture. The recognition framework is demonstrated with examples which include two hands dynamic gestures. The gestures considered for the
development of algorithm are generic in nature and can be applied to various applications where information is not conveyed through speech, like space gestures, under water gestures, airplane parking signs, sign language gestures, etc.

References


Index Terms

Computer Science
Emerging Trends in Technology

Keywords
Human Machine Interaction; Gaussian Mixture Model; Motion Trajectory; Condensation; dynamic hand gesture