Hand Motion Trajectory Analysis for Dynamic Hand Gestures Used in Indian Sign Language

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Abstract : Dynamic hand gestures are an intrinsic component in sign language communication. Extracting spatial temporal features of the hand gesture trajectory plays an important role in a dynamic gesture recognition system. Finding a discrete feature descriptor for the motion trajectory based on the orientation feature is the main concern of this paper. Kalman filter algorithm and Hidden Markov Models (HMM) models are incorporated with this recognition system for hand trajectory tracking and for spatial temporal classification, respectively.