HUMAN TRACKING AND POSE ESTIMATION IN VIDEO SURVEILLANCE SYSTEM

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ABSTRACT

Video surveillances system based on human detection, tracking and human pose estimation assurances to be an important technology for real time applications, including the analysis of human activities. So many applications have been demonstrated regarding this technology but evaluations of some key features are remains challenging. How human being going to be detected that is the challenge i.e. According to body structure, skin color, skeleton, etc. It is very complex because each human being has different human kinematic structure, variation in body size and shape. In the human tracking process occlusions of body parts, inabilities to observe the skeletal motion due to clothing, difficulty segmenting the human from the background these are the challenges. Pose estimation is also challenging because complex interactions between people in the environment, clothing complicates the skeleton structure, and significantly increases the inconsistency of individual human appearance. Some image related components also increases the challenges because limited image resolution, number of ambiguities, and the inability to easily distinguish the parts of a human from occlusion or from the cluttered background. With the prior knowledge some of these challenges are resolved, but some of the problems require clever mathematical and engineering solutions.

KEYWORDS: Discriminative Methods for Pose Estimation, Human Detection, Human Tracking, Kalman Filter for Tracking, Pose Estimation, Histogram of Oriented Gradient Algorithm