Detection and Tracking for Surveillance

Larry S. Davis
Department of Computer Science
Institute for Advanced Computer Studies
University of Maryland
USA

lsd@umiacs

Abstract

This tutorial will cover problems related to detection and tracking from surveillance video. For detection, I will cover background subtraction for fixed and pan/tilt/zoom cameras, shape-based detection using machine learning techniques, and the use of periodic motion models to discriminate people from other moving objects in video. For tracking, I will discuss discus basic representation and control problems in tracking objects both continuously and with time gaps in coverage.