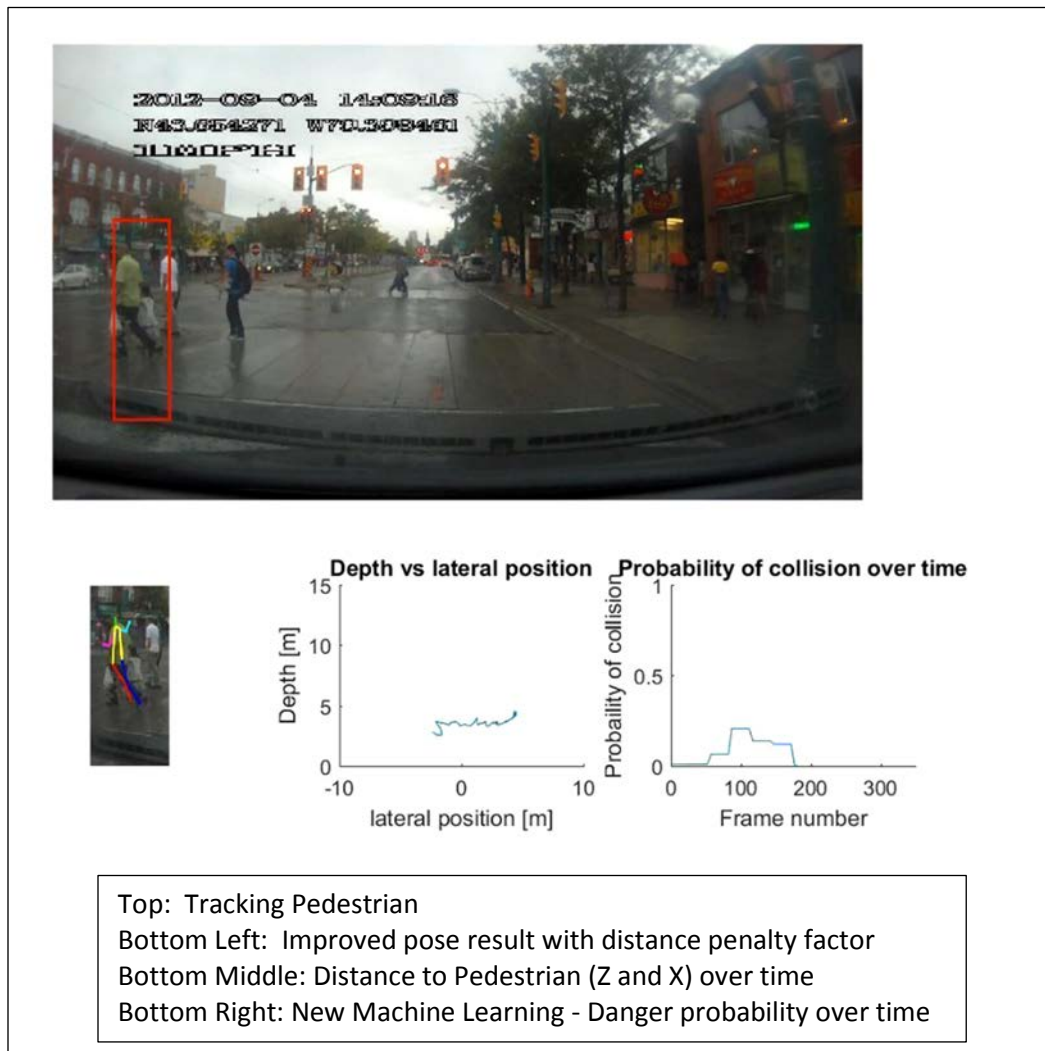


**Title of Project:** Semantic Pedestrian Motion Behavior and Vehicle-Pedestrian Interaction using Naturalistic Driving Video (*Funded by Samsung 2015-16*)

**Project Director:** Lauren Christopher, Renran Tian

**Area:** Image Processing, Deep Learning

**Brief Description:** To design robust Pre-Collision Systems (PCS) we must develop new techniques that will allow a better understanding of the vehicle-pedestrian dynamic relationship, and which can predict pedestrian future movements. We are using deep learning and neural net techniques to classify potential-conflict situations where a collision may happen if no avoidance action is taken from driver or pedestrian. The research enables new analysis on potential-conflict pedestrian cases with the 2D tractography data and stick-figure pose representation of pedestrians, which provides significant insight on the vehicle-pedestrian dynamics that are critical for safe autonomous driving and transportation safety innovations.



Link: <http://www.engr.iupui.edu/~lauchris/Assets/PedestrianTrackingPose.avi>