

ABSTRACT

Pedestrian is a term in transportation that is used to describe people who walk on pedestrian paths either on roadsides, sidewalks, special paths for pedestrians or crossing roads, several studies on pedestrians have identified that pedestrians occupy a significant proportion of victims of accidents. both seriously injured and dead. Object tracking functions to classify objects and mark their exact position in images or videos, therefore a tracking solution for pedestrians even in total darkness can use a thermal camera.

In this final project, we have created a system that can be used to classify objects tracking obese humans who are in dark conditions or lack of lighting using the Android version of the Flir One Gen 3 camera by using the Transformation Gaussian Progress Regression (TGPR) tracking method and comparing it with the tracking Ridge Regression (RR) and Hedge Deep Tracking (HDT) based on distances of 10 meters, 15 meters and 20 meters.

Based on the results of the research in this final project with a total of 1684 images to get the best performance for each distance the Success Plot is the Ridge Regression (RR) method of 99.44% at a distance of 10 meters, 100% at a distance of 15 meters and 99.79%, at a distance of 20 meters. For the Precision Plot at location error threshold 10 the Ridge Regression (RR) method remains the highest, where at a distance of 10 meters is 0.3797, a distance of 15 meters is 0.4083 and a distance of 20 meters is 0.5356. From this performance it is influenced by K , where K is a numeric vector if the value is smaller than 1 then it produces bounding box that does not match and if the value is 1 it will produce a suitable bounding box.

Keywords: *Hedged Deep Tracking (HDT), ioU Threshold, kamera termal, Object tracking, Precision Plot, Ridge Regression (RR), Success Plot, Transformation Gaussian Progress Regression (TGPR)*