

Abstract

Human height estimation are one of research field that used in digital forensics to assist the forensics expert for digital images identification. Most of the research before using a method that are specific to certain condition so it's hard to used it to estimate many variant of images. In this research, we propose a method to estimate human height with minimum information required from the images. The proposed method can be divided into two major step. First, we calculate the person and reference object height in pixel. Second, we build a linear regression model with the 141 dataset that we calculated before. Then we evaluate the model with two scenarios, normal and abnormal. When tested in normal scenario, the average estimation error are 1.76% with total 72 data testing. Then, we have some results from abnormal scenario, i.e. 3.92% for arbitrary model, 1.56% when there is no distance data, and 2.9% when the images without reference object. Although our model are not the best in the accuracy of estimation result, the error is quite low considering considering the method we use and the images variant that can be estimated using our model.

Keywords: human height estimation, object detection, linear regression, image forensics