Abstract

There have been many cases of work accidents caused by not complying with safety standards at work, especially in the use of safety helmets. This study is able to make regular observations in identifying project personnel using safety helmets at work, this aims to reduce the risk of accidents at work, namely in the use of helmet attributes at work. Some previous studies, have proposed the use of image detection-based models using the Detection Transformer (DeTr) method for obtaining object detection, group prediction, and combining methods, using the Intersection over Union (IoU) method for obtaining object detection results, to achieve the best performance, namely to get convergence results. Based on the combination of these two methods, the results value of average IoU is 0.50 from 500 identified project personnel data were obtained.

Keyword: ***safety helmet detection, IoU, DeTr, deep learning***