

ABSTRACT

The development of the camera until now developed rapidly after digital cameras were developed. Now the camera has reached a pixel that is high enough to almost match the pixel level of the human eye, even on cellphone cameras there are already 50 pixels. So that in other fields, especially computer vision can develop to a higher level. But unfortunately, sometimes not everyone cannot enjoy the advancement of technology, namely people with disabilities, especially the deaf and speech impaired in communication. Even though with advances in technology, people with disabilities will be helped easily. Therefore, developing computer technology, especially in the fields of Machine Learning and Computer Vision. So based on the above, this final project is expected to help develop computer vision technology in reading Sign Language and as well made to help people with disabilities, especially deaf and speech impaired, to help communicate with other normal humans through Sign Language. This system uses the Faster Region Convolutional Neural Network (Faster R-CNN) method as the core of the machine to assist Sign Language classification. The results of this study produce a model with mAP = 0.50 IoU amounting to 100.00% and mAP = 0.75 IoU amounting to 98.07% under predetermined conditions.

Keywords: *Machine Learning, Computer Vision, Disability, Camera, Communication. Faster Region Convolutional Neural Network (Faster R-CNN).*