

Abstract

Deaf is a person who has permanent or non-permanent hearing loss. In a 2016 news story at TribunSolo.com entitled "Indonesia Lacks Sign Language Interpreters". in the news stated that the existence of sign interpreters in Indonesia is very minimal, resulting in hearing impaired people have difficulties when accessing public facilities ranging from government, education, public transportation, to hospitals. With that we need an application that can help others to be able to understand what is said by people with hearing impairment.

It is hoped that using the convolutional neural network (CNN) method can translate symbols in the deaf sign language, namely the Indonesian sign system (SIBI) accurately so that normal people can understand the symbols exhibited by persons with hearing impairment who are in Indonesia. So that it can help people with hearing impairment to be able to use an existing public facility.

By using a model using the convolutional neural network method and using image with grayscale so can classify with an accuracy of 90.48%. And the model is inserted into assets in the android studio and the model can be used in a smartphone so that it can translate sign language (SIBI) with a fixed background.

Keywords: Deaf, convolutional neural network, sign language, Indonesian sign system, application, smartphone, android studio