



PROJECT REPORT

OPTIMIZING CNNS FOR FACE RECOGNITION: COMPARING WELL-KNOWN ARCHITECTURES WITH CUSTOM MODELS

THEODORUS ADRIAN SETIAWAN
20.K1.0014

Faculty of Computer Science
Soegijapranata Catholic University
2024

ABSTRACT

This project aims to find which CNN architecture is the best. From the research results, well-known CNN architectures give better accuracy than the custom made one. Face recognition is useful for distinguishing someone's facial data that is already in the database. With this, the system can save someone's facial data so that it can be used later for other purposes. In this research's photo data will be used and there are three types of datasets, 20% of the whole dataset are used as testing. Then, one type of photo is removed from training and used in testing. Thirdly, a new 100 photos, facing forward while using glasses, is used for testing. This will test the system to show the possible accuracy rates as the outcome. CNN Algorithm shows great results in terms of researches on face recognition. Well-known CNN algorithms, VGG16 and AlexNet, tend to give a high accuracy result according to many studies. Thus, this research uses two well-known CNNs as its architecture.

Keyword: CNN Algorithm, face recognition, VGG16, AlexNet

