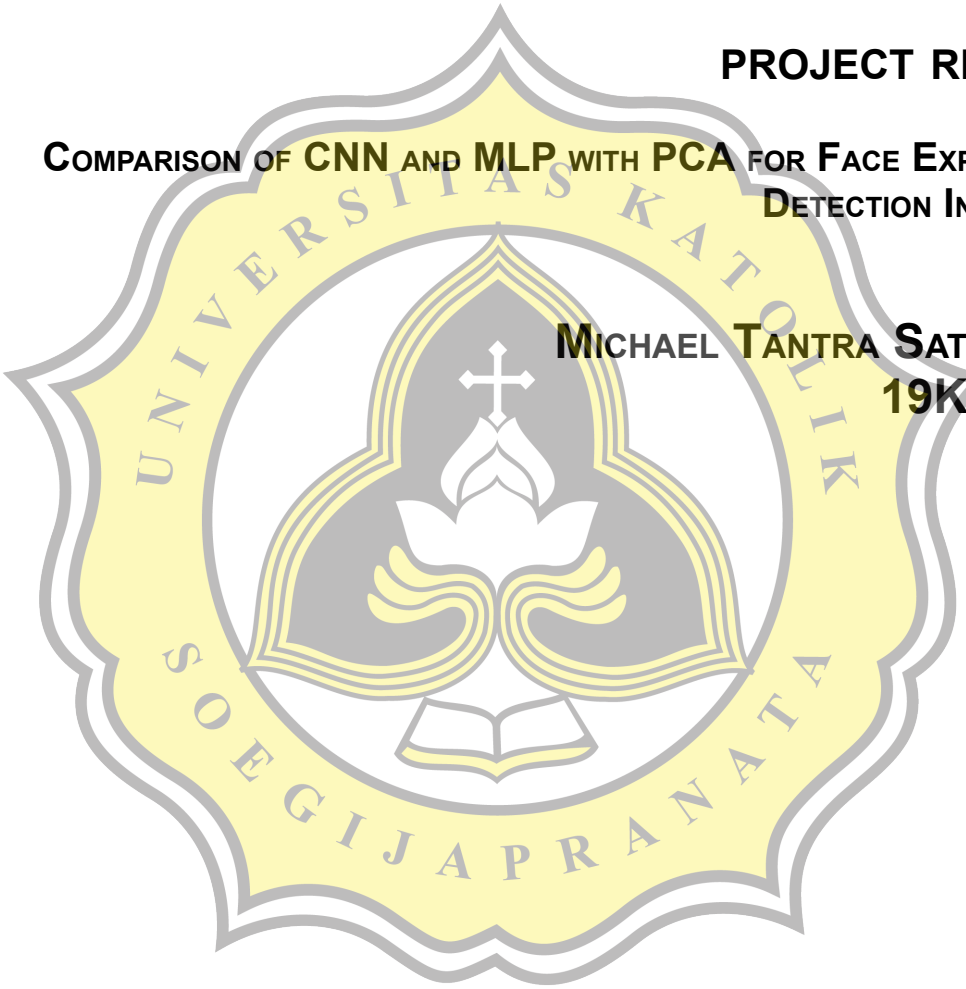


PROJECT REPORT

Comparison of CNN and MLP with PCA for Face Expression Detection In Manga

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ABSTRACT

Facial Expression Recognition (FER) is cutting edge technology that enables machines to identify and interpret human emotion. However, there is limited research on facial expression in manga. This study will compare two methods that are Multi Layer Perception (MLP) with principal Component Analysis (PCA) and Convolution Neural Network (CNN), for manga facial expression image using Orange Data Mining with VGG-16 as feature extractor and dataset come from kaggle. The result PCA+MLP have 0.865 accuracy and CNN have 0.894 accuracy, this shows that CNN have better accuracy then PCA+MLP. But this study also found overfitting data because of a low database. In conclusion CNN is recommended for facial recognition in manga, and for feature study to increase dataset and try different methods.

Keyword: CNN, MLP, Orange Data Mining, VGG-16, Manga, Facial Expression Recognition

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