

CHAPTER 6

CONCLUSION

From the experiment result, we can say that these two algorithms are almost equivalent. There is only a slight difference between the two algorithms in terms of accuracy and time. However, considering the convenience and running time, in this case, the DNN algorithm is preferred rather than the PCA algorithm. However, there is a chance you might choose the PCA algorithm, especially when your dataset is limited. We must thoughtfully consider the selection of an algorithm according to the needs and abilities of the users themselves. Different conditions can also affect the passage of the algorithm that is suitable for you.

Further research is needed because within this project, the DNN algorithm is implemented using Keras assistance. This might be a great advantage to the DNN result that makes the comparison unbalanced. In the future experiment, we could try to implement the PCA algorithm using the available libraries in Python. We can also try to use the enhanced PCA algorithm to overcome various conditions, especially datasets diversity. Above that, bigger datasets are needed in order to emphasize the final results and conclusion.

More extensive research also intended to conduct the same experiment using a different face database and compare the results with our current experiment to ensure the validity of current implementation over different types and sizes of databases.