

## CHAPTER V

### CONCLUSION AND SUGGESTION

#### 5.1 Conclusion

After conducting research on the utilization of a mobile-based face attendance system, it can be concluded that the development of the application has been successful. This facial recognition system can be deployed when the students get into the class using personal devices and for the security we can get the location for make sure students already in class when they make attendance. The chosen method for implementing Machine Learning in this study was Neural Network. Neural Network was deemed highly suitable for this research as it requires a pre-existing dataset for Machine Learning to operate effectively. The face attendance application underwent testing using five different dataset models. The face recognition process was carried out in real-time, with the tested faces positioned accurately in front of the camera at a distance of 20-30cm. Based on the obtained results, the integration of Flutter programming and Machine Learning was successfully executed without encountering any errors. The accuracy rate of the face attendance system achieved a score of 92%, and the dataset loading process to the database took only 653 milliseconds. It is important to note that errors in the face recognition system can be caused by various factors, such as lighting conditions, viewing angles, skin color, and facial similarities. However, the program is also capable of recognizing faces under specific conditions, such as when individuals wear glasses, as long as the face is not obstructed and remains within the camera's range.

#### 5.2 Suggestion

The research conducted by the author has certain limitations due to their constraints. Therefore, the author would like to provide some recommendations for future researchers to enhance the integration of face recognition systems with applications or other Machine Learning methods, with the goal of achieving higher system accuracy. Furthermore, it is suggested to improve both the user interface and data processing of the system for better performance.