CHAPTER VII. CONCLUSIONS AND SUGGESTIONS

7.1 Conclusions

Based on the results of research and development from Face Recognition Attendance System Using CNN, the conclusions are:

1. From 10 respondents, 70% agree that presentik application can reduce attendance fraud such as “Titip Absen”.
2. The best combination of face recognition model and backend detector is ArcFace with Retina Face, with this combination we can increase accuracy in doing facial recognition in various poses
3. The difference in lighting for attendance photos with datasets is quite influential, such as datasets that have natural light and are bright enough and attendance photos that have colored light can affect the results of cosine distance
4. In the face recognition experiment using the presentik application, the highest accuracy in the advanced algorithm was 100% in Brian (Natural) and the smallest was 20% in Veronicha (Mask) and for the basic algorithm the highest accuracy was 87% in Brian (Natural) and Dhana (Natural) and the smallest at 0% in Maretya (Natural and Hijab)
5. In an experiment with facial recognition accuracy using the presentik application, the average accuracy for advanced algorithms is 67% and basic is 47%, this average is obtained without distinguishing the accessories worn on a person's face.
6. This presentik application can record attendance time with automated time taken from the time of the device at the time of attendance and record attendance location by taking the location of the device at the time of attendance.
7. This presentik application can save attendance logs in the form of excel and zip files containing photos of guest faces when attending attendance.

7.2 Suggestions

From the results of research and development Face Recognition Attendance System Using CNN, of course, it still has some shortcomings. The following suggestions are given for this development in the future, namely:

1. Can develop better accuracy results and faster face recognition or representation time.
2. Can check ”titip absen” fraud by strengthening the face recognition system in real time, so it cannot detect faces from photos or other media.

3. Perform attendance in the application in real-time so there is no need for sending photos by taking photos and then sending photos to the endpoint manually.
4. Can optimize preprocessing time so that the results obtained are more accurate and faster.
5. The attendance distance limit that was originally calculated between the points can be replaced with the area of the event location
6. Entering guest data and facial datasets is easier, can add participant features to register for the ongoing event