

**Project Title**: Face Recognition based Attendance Application

# A PROJECT REPORT

*by:*

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# Abstract

The purpose of the project was to develop a Face recognition based Attendance Management System. The project will develop an Android application that can import a classlist (CSV) file with photos to train a face detection algorithm. The face detection algorithm used in this project is the Facenet library, which is one of the best performing facial detection libraries in today’s technology. The classification/ recognition in the faces detected was done by implementing the SVC(Support Vector Classifier) model after the implementation of the facenet model(One shot learning model). The program is used to take a series of photos of each class, extract faces and present the recognition results as a series of face images along with the student name to the instructor. The instructor then can manually correct any mis- identified students and use these labels to further train the program to improve the accuracy. The instructor will be able to see the labels with the true and the captured image as a result. This feature ensures that the model is trained well on misclassified labels by correcting them manually on the app.

The program produces a .xlsx file containing the attendance record in a form that is suitable for importing to Owl. It shows better than 90% accuracy after 2-3 misidentification corrections.

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