Dr. Shafaf Ibrahim

Universiti Teknologi MARA

Smart Attendance System via Facial Recognition Using Tensorflow Facenet Model

Ahmad Muizzuddin Bin Shahrel

Final Year Project Proposal
Bachelor of Computer Science (Hons.)
Faculty of Computer and Mathematical
Sciences

September 2019

SUPERVISOR'S APPROVAL

SMARTATTENDANCE SYSTEM VIA FACIAL RECOGNITION USING TENSORFLOW FACENET MODEL

By

AHMAD MUIZZUDDIN BIN SHAHREL
2017412268

This thesis was prepared under the direction of thesis supervisor, Encik Ahmad Firdaus bin Ahmad Fadzil. It was submitted to the Faculty of Computer and Mathematical Sciences and was accepted in partial fulfilment of the requirements for the degree of Bachelor of Computer Science (Hons).

Approved by:

AHMAD FIRDAUS BIN AHMAD FADZI
Pensyarah
Fakulti Sains Komputer dan Matematik
Universiti Teknologi MARA (Melaka) Kampus Jas
77300 Merlimau, Melaka,
_____

AHMAD FIRDAUS BIN AHMAD FADZIL

Project Supervisor

STUDENT'S DECLARATION

I certify that this report and the project to which it refers is the product of my own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledge in accordance with the standard referring practices of discipline.

_____

AHMAD MUIZZUDDIN BIN SHAHREL

201412268

ABSTRACT

Student absenteeism problems are often a major issue for every school and are often associated with low student scoring status. This can be attributed to the weakness of the current method of taking attendance which used a sheet of paper. The system is developed to improve the current attendance system where several problems appear during the school attendance taken. For example, the student deceived their attendance, time consuming for waiting to sign the attendance and the lack of ability to track the absence of many students. This system can give better support and help the teacher's work on the attendance. Popularity of biometric recognition where human unique physical body as a measurement access control for identification and authorization has led to the development of Smart Attendance System using facial recognition. An identification system is used to digitally verify a person by comparing each known face and information corresponding to the database. The Tensorflow Facenet model is the technique used for the recognition where it's called as one shot model where directly learning and mapping the face images into Euclidean space where distances are used to calculate the similarity of faces. With the facial recognition feature, this system can easily manage and automate taking attendance and safely record it in the database.

Keywords: Attendance, Tensorflow, Facenet, Face Recognition, Python, C#

TABLE OF CONTENT

CONTENTS   **PAGE**