ABSTRACT

This final project research focuses on making a prototype parking access data collection system using facial recognition with openCV python based on a special parking lot for employees at PT Japfa Comfeed Indonesia tbk. Jalan Daan Mogot Raya KM 12 No.9 Cengkareng Timur, West Jakarta. The purpose of this study is as a simulation material if this prototype is implemented in real time, understand how the python programming language works to be able to do facial recognition that is connected to a database to be able to record it in real time, to know how the infrared sensor works as a detection tool that is connected to the arduino uno to provide information to the servo. The method used in this study is a direct research method or a survey in the field with observations. The discussion is carried out descriptively, namely by describing the conditions that occur in the field. After doing research and going through the planning, prototype design, and tool testing stages, it was found that the parking access prototype using facial recognition with opencv python can perform facial recognition using a web camera to motorists who want to access and exit the special parking lot for employees of PT Japfa Comfeed Indonesia tbk then record it in the database and can find out whether the driver is an employee or not by displaying the results of facial recognition on the laptop. Based on the test of 100 trials carried out with a threshold determination of 0.6 (60%) resulted in 85 successful trials with the highest value of 0.92 (92%) and 15 unsuccessful trials with the lowest value of 0.4 (40%). Then obtained an accuracy value of 85%.

Key words: prototype, opencv, python, face recognition, web camera, parking lot, database, laptop.