

# ***DESIGN AND BUILD A HOME DOOR SECURITY SYSTEM USING FACE RECOGNITION AND PASSWORD AS TWO- STEP VERIFICATION ON SMART DOOR***

**Ahmad Nur Muthayyib**

*Electrical Engineering Study Program, Faculty of Science and Technology*

*University of Technology Yogyakarta*

*Jl. Ringroad Utara Jombor Sleman Yogyakarta*

*E-mail: [ahmadnmuthayyib@gmail.com](mailto:ahmadnmuthayyib@gmail.com)*

## **ABSTRACT**

*The security system is very important for us, one of which is the security of the door of the house. Currently, many home door security systems still use conventional door locks. One of the disadvantages of conventional locks is that they are easy to break into. In addition, many people also ignore the importance of monitoring around the door. Therefore, a system was created to improve door security that can overcome these problems by using an Android application based on Face Recognition and Password to increase door security. The results of this study are that the application can be used to access the door by entering the password from the android application, if the password is entered correctly, it will automatically turn on the ESP32 Cam-based camera installed in the door area, so we can scan our faces. When scanning is done, the system will compare whether our faces are registered on the sd card embedded in this ESP32 Cam, if our faces are detected, we will continue with the next step, namely activating the Servo Motor.*

**Keywords:** *Face Recognition, ESP32, Password, Servo Motors*