

ABSTRACT

Security is a very important aspect in various contexts, but there are several obstacles in the use of security, such as the unstable identification process and the possibility of errors in finding personal data. Currently, some security systems experience problems, such as finger prints that cannot identify in wet or dirty finger conditions, as well as personal data search errors through face recognition.

Therefore the author proposes a pose-based automatic door security system, this is because it is easy to use and also guaranteed security. The system can use face data and hand poses for identity verification, then faces and poses are compared with data that has been registered and this system has 2 steps to open the system, then this system protects pose data with strong encryption and can prevent users who want to manipulate data, so its security is very difficult to hack.

With this pose-based security system, it will add a higher and effective level of security, because the system is more rigorous and accurate in its security, and also in its easy use for all people. Then it can also add variations in security systems that are more diverse and safe than the previous security systems.

The results show that the system is able to detect faces and palms within a distance of 30-100 cm with an accuracy rate of 94,5%. The system also successfully actuates the door lock automatically after the corresponding pose is verified and has an accuracy rate of 84%. From the tests conducted, it was found that the system has a low error rate. In addition, the system is able to respond quickly to pose changes, ensuring that the door is only opened by authorized users.

Keywords: Security, Face, Pose, System