Design of Home Door Security System Based on Internet of Things Technology with Augmented Reality Application

Ahmad Bagus Solehan

Program Studi Teknik Komputer, Fakultas Sains & teknologi Universitas Teknologi Yogykarta Jl. Ringroad Utara Jombor Sleman Yogyakarta E-mail : <u>ahmadbs811@gmail.com</u>

ABSTRACT

Augmented reality (AR) technology integrates virtual objects with real-world environments, enhancing user experiences through computer-generated imagery. The potential benefits of AR are significant, particularly in terms of human convenience. For instance, home door security is a critical aspect of overall safety, as doors serve as the primary barrier in a security system. To improve both security and convenience, it is essential to develop innovative solutions that leverage various technologies. The purpose of this study is to design a home door security system that utilizes the Internet of Things (IoT) and augmented reality applications. This system aims to facilitate easy and secure access to home, hotel, or apartment doors. Users can employ a smartphone camera and software to scan a designated marker, which will then display a 3D object on the smartphone screen that represents the door-opening mechanism. By integrating IoT technology, the system will send a signal to activate a solenoid door lock, allowing the door to open seamlessly.

Keywords: Augmented Reality, Home Door Security, Selenoid Door Lock, 3D Objects.