ABSTRACT

This project offers a Face Recognition Based Smart Lock System that uses IoT devices such as Arduino Uno microcontrollers and a solenoid lock to create an efficient access control mechanism. Facial recognition, a subtype of biometric identification, is used because it has distinct advantages over traditional techniques, such as removing the need for physical keys or access cards while maintaining a high level of accuracy and security. The addition of IoT devices improves system functioning by allowing for remote monitoring and administration of access, as well as seamless connection with other smart home products. This study summarises the system's design, implementation, and functioning, including hardware and software components, facial recognition methods, and performance assessment. The Face Recognition Based Smart Lock System represents a significant leap in access control technology, providing a safe, easy, and dependable solution for current security concerns by combining face recognition with IoT devices.