Abstract

The fingerprint-based fraud detection voting system is a project that aims to address the inefficiencies and vulnerabilities in the current voting system by introducing an innovative approach to voting authentication and fraud prevention. Traditional voting systems often rely on identification cards, which can be susceptible to duplication and misuse. In this project, we propose a solution that utilizes biometric fingerprint recognition technology to authenticate voters, ensuring secure and reliable voting processes. The system involves the development of an online voting machine equipped with a fingerprint reader. During the registration process, voters' fingerprints are stored as unique identifiers. On the day of voting, the fingerprint reader acquires the voter's fingerprint and compares it with the pre-stored data to verify their identity. This eliminates the need for physical identification cards and reduces the risk of fraudulent activities. To maintain voter anonymity, the system assigns each user a unique and random ID, ensuring no connection to their personal details. The interface of the voting machine is designed to be user-friendly and intuitive, prioritizing clear visual representation of data and basic functionalities. This enables voters to cast their votes easily and confidently, enhancing the overall voting experience. The fingerprint-based fraud detection voting system offers several advantages over traditional methods. It significantly reduces the risk of voter fraud by relying on the uniqueness of fingerprints, which are difficult to forge or manipulate. Moreover, it eliminates the need for voters to carry identification cards, streamlining the voting process and reducing the chances of lost or stolen cards. Through this project, we aim to contribute to the improvement of voting systems, ensuring fairness, accuracy, and transparency in the electoral process. By leveraging the power of biometric fingerprint technology, we can enhance the security and integrity of voting, fostering trust among voters and promoting