

AI Based Smart Voting using Face Recognition

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Abstract: *As society changes and technology plays a bigger role in shaping daily life, the security, effectiveness, and accessibility of traditional voting systems are being questioned. This research presents a novel approach to create an online smart voting system using facial recognition technology. The technology promises to improve the convenience and integrity of electoral processes by integrating cutting-edge facial recognition algorithms with secure online voting platforms. It also addresses common problems such as voter fraud, long lines, and geographical restrictions. The system verifies each vote's legitimacy by registering voters' facial biometric information, securely storing it in a centralized database, and providing live facial authentication while voting. Strong security protocols, such as multi-factor authentication and encryption methods, are notably used to protect voter privacy and prevent election results manipulation. Additionally, the system's removal of the requirement for voters to physically be present at polling places improves voter accessibility, especially for underprivileged or geographically separated groups, which encourages higher levels of political engagement. Through extensive testing and validation that includes both simulated and real-world voting scenarios, the efficacy of this novel approach will be closely examined. Consent, transparency, and data privacy are ethical issues that need to be properly addressed in order to ensure compliance with legal and regulatory requirements. In conclusion, the face recognition online smart voting system is a ground-breaking advancement in electoral technology that might fundamentally alter the way elections are held by enhancing their integrity, efficiency, and inclusivity*

Keywords: AI-Based, Facial Recognition, Authentication, Web-Based Application, Security Enhancement