

# Blockchain Based Secure Voting System with Multi- Factor Authentication

Prof. Malatesh Kamatar<sup>1</sup>, Prof. Indira<sup>2</sup>

Ms. G. Mahalaxmi<sup>3</sup>, Ms. Kavya B.R<sup>4</sup>, Ms. M Thasleem<sup>5</sup>

<sup>12</sup>Professor, CS&E Dept, Proudhadavaraya Institute of Technology, Hosapete, Karnataka, India

<sup>3456</sup>Students, CS&E Dept, Proudhadavaraya Institute of Technology, Hosapete, Karnataka, India

**Abstract:** *This project presents a Blockchain-Based Secure Voting System with MultiFactor Authentication, designed to ensure transparency, integrity, and accessibility in digital elections. The system integrates blockchain technology to guarantee tamper-proof and immutable vote records, while a four-step multi-factor authentication process ensures that only authorized voters can participate. The authentication flow includes Face Recognition, Fingerprint Verification, OTP Validation, and Dummy Aadhar Authentication, thereby minimizing risks of impersonation, fraud, or unauthorized access. An Admin Panel is developed to manage voters registration, candidate and election setup, and result monitoring.*

**Keywords:** Blockchain, Secure Voting System, Multi-Factor Authentication, Biometric Verification, ace Recognition, Fingerprint Authentication, OTP Verification, Dummy Aadhar Validation

