

Problem Statement for Voting System

Title

Enhancing the Efficiency and Security of Electronic Voting Systems

Background

Voting is a cornerstone of democracy, yet traditional voting methods often face challenges such as long queues, human errors in ballot counting, and logistical inefficiencies. With the advent of electronic voting systems, many of these challenges can be mitigated. However, existing electronic voting solutions are not without flaws, including concerns over cybersecurity, voter accessibility, and transparency. These issues have raised questions about public trust in the integrity of the voting process.

Problem Description

Despite the potential of electronic voting systems to streamline the voting process, they face critical issues that limit their effectiveness and adoption. Cybersecurity threats, such as hacking and data breaches, jeopardize the confidentiality and integrity of voter data. Additionally, accessibility barriers for marginalized groups, including people with disabilities and those in remote areas, restrict equitable participation. Furthermore, the lack of transparency in how votes are recorded and verified undermines voter confidence. These challenges highlight the need for a robust and secure voting system that is accessible, transparent, and trustworthy.

Goals or Objectives

The objective of this project is to:

- Identify the weaknesses in current electronic voting systems, particularly in terms of security and accessibility.

- Develop solutions to enhance the security of voter data and prevent tampering with election outcomes.
- Improve accessibility features to ensure inclusive participation for all voters.
- Establish transparent mechanisms for vote verification and auditing to boost public trust.

Justification

Addressing the challenges of electronic voting systems is crucial for strengthening democratic processes and ensuring fair elections. A secure and accessible voting system promotes voter participation, reduces errors, and safeguards the integrity of elections. This research and development effort will provide practical insights for governments and organizations to implement reliable electronic voting systems that uphold democratic values while addressing the needs of diverse populations.