

**DESIGN AND BUILD E-VOTING SYSTEM WITH SMART CONTRACT  
FUNCTIONALITY BASED ON ETHEREUM BLOCKCHAIN**

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***Abstract***

*The electoral system in Indonesia still uses a manual system, which means that fraud and manipulation of data can still occur by a group of parties. In the 2019 election, there were many cases of death of KPU officers due to fatigue, making the country lose in many ways. E-voting is designed so that users can vote anywhere without feeling the distance and can save personal expenses. However, e-voting does not guarantee the security of data storage. The research entitled "Design of an e-voting system with smart contract functionality based on Ethereum blockchain" is expected to be able to overcome security in data storage and have features that can assist KPU officials in carrying out elections.*

*E-voting with smart contract functionality based on Ethereum blockchain is a system that uses blockchain as data storage. Blockchain has many cryptographic hash functions to create encrypted data into the blockchain system by storing data into blocks that are interconnected with other blocks. With the smart contract function, blockchain features can be used functionally as a way to calculate vote results and save voter data from the website to the blockchain. Smart contracts are coded using the Solidity Language, which is Ethereum's language.*

**Keyword :** Blockchain, E-Voting, Smart Contract, Voting, Ethereum