Related Work

Blockchain technology is emerging as a transformative solution for addressing governance challenges in various domains. Exploring several documents that gives an information on blockchain in revolutionizing e-governance. "Blockchain Technology and Its Applications in E-Governance Services" by Om Pal and Surendra Singh [1] discussed an in-depth discussion of blockchain technology, its technical aspects, potential applications, and challenges. Especially the applications of e-commerce and e-governance in "Application of Blockchain Smart Contracts in E-commerce and Government" by Kamal Kishor Singh [2] discusses the implications of blockchain smart contracts in e-commerce, highlighting their potential to enhance security, accountability, and transparency. Also, applications in agriculture give us from "Blockchain: Future of e-Governance in Smart Cities" by Abhirup Khanna [3] Employs the decentralized and secure nature of blockchain, its impact on transparency and efficiency, and its application in industries like agriculture. gives us a detailed idea of this in "Land Registration: Use-case of e-Governance using Blockchain Technology" by Karthika Veeramani and Suresh Jaganathan [4] which focuses on the specific use case of land registration, highlighting the transparency and trust-enhancing features of blockchain. The applications discussed by Abhiroop Khanna and karthika lift up to authentication of offline and online levels by "Sensen Hu and Shan Huang's [5] paper on Exploring blockchain-supported authentication based on online and offline business in the organic agricultural supply chain" proposes two models that utilize the blockchain to enhance credibility, efficiency, and transparency in offline and online business scenarios. supply chain companies can document production updates to a single shared ledger, which provides complete data visibility and a single source of truth. The study "Blockchain Technology for Secure Supply Chain Management: A Comprehensive Review" by Udit Agarwal et al.[6] discusses the benefits of blockchain adoption in supply chain management, including enhanced security, transparency, and efficiency. An example of Walmart is Walmart's innovative use of technology to track the provenance and condition of its pork products coming from China. That’s why tracking, performance, and robustness of the system are major factors ."The effect of management accounting and blockchain technology characteristics on supply chains efficiency" by Murad Ali Ahmad Al-Zaqebaa et [7] examines the positive impact of blockchain technology and management accounting on supply chain efficiency. While blockchain for business shifts from traditional methodology to new technology trust and transparency are important factors. “The effect of management accounting and blockchain technology characteristics on supply chain efficiency" by Murad Ali Ahmad Al-Zaqebaa et al.[8] examines the positive impact of blockchain technology and management accounting on supply chain efficiency. The reliability of a project or system is based on the code and proper deployment of required functions. The logic or self-executing programs called smart contracts "Siddhartha Sen and Shripati Mukhopadhyay's [9] proposed a solution on A Blockchain-based Framework for Property Registration System in E-Governance" proposes a Smart Contract-based framework to improve security and efficiency in property registration. offered a private blockchain as a solution to the problem of scalability by incorporating techniques from Osama I. Kadhum and Ali H. Hamad's study, "Performance Evaluation of Multi-Organization E-Government Based on Hyperledger Fabric Blockchain Platform," [10] which examines the performance of the Hyperledger Fabric platform in enhancing security and transparency in e-governments.