A Review on Traceability System for Fruit and Vegetables Agricultural Products Using Blockchain

Prof. Siddhesh Sunil Gadge[1], Kulkarni Diksha Narayan[2],
Pathare Rutuja Lahu[2], Shelke Vaishnavi Uttam[2]

Assistant Professor, Department of Computer Engineering[1]

Students, Department of Computer Engineering[2]

Samarth College of Engineering and Management, Belhe, Junnar, Pune, Maharashtra, India

Abstract: *This paper presents a blockchain-based traceability system designed to enhance the transparency and efficiency of the agricultural supply chain for fruits and vegetables. By leveraging blockchain technology, the system enables real-time tracking of products from farm to consumer, ensuring data integrity and reducing the risk of food fraud. Each transaction is recorded on a decentralized ledger, allowing stakeholders—farmers, distributors, retailers, and consumers—to access accurate information regarding product origins, handling processes, and quality metrics. This traceability system not only fosters consumer trust but also assists in compliance with regulatory standards and enhances food safety by enabling quick identification of contamination sources. The implementation of this solution can significantly improve supply chain management, reduce losses, and promote sustainable agricultural practices, ultimately benefiting both producers and consumers*

Keywords: Blockchain Based System, Smart Contract, Trusted Supply Chain, Traceability, Transparency, Quality Control