

Integrated System for Management of Food Supply Chain using Blockchain

Rajat Dash¹, Shruti Sharma², Ashwani Kumar³

UG Student, Computer Science and IT¹,

UG Student, Information Technology²,

Assistant Professor, Department of Computer Science and IT³

Dronacharya College of Engineering, Gurgaon, Haryana, India

Abstract: According to WHO, over the past decade the South-East Asia Region has witnessed a staggering number of people affected by foodborne diseases. In 2010 alone, nearly 150 million people fell ill due to contaminated food, leading to a heartbreaking 175,000 deaths. The burden of this issue disproportionately affects young children, with 40% of foodborne disease cases occurring among children under the age of 5. It's worth noting that malnutrition is also a significant problem in the region, and poor sanitation practices exacerbate this issue. Approximately 50% of malnutrition cases stem from unhygienic practices and life-threatening infections, such as diarrhea, rather than a poor diet. In these situations, a well structured integrated platform is required to monitor the food supply chain straight from the producer to consumer in a way that other government authorities can track the quality of the products of different producers. This paper is an attempt to create an SDK that can integrate with online marketplaces in order to trace the quality and quantity of the food products by storing the data of the entire supply chain using smart contracts and providing the data to the end consumers using ledger.

Keywords: Blockchain, Ethereum, Food Supply Chain, Cross Platform Application, Solidity

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