

## ABSTRACT

The pharmaceutical industry's supply chain is outdated and lacks transparency, allowing counterfeit drugs and vaccines to circulate in the market, posing a significant threat to public health. According to the World Health Organization, around 10.5% of the medicinal drugs in low/middle-income countries are fake and may lead to serious health risks and even death. In this paper, we propose a blockchain and IoT-based model to track drugs from the manufacturing industry to the pharmacy and minimize the circulation of counterfeit drugs. Blockchain's immutability property makes it a suitable technology for our proposed model. GPS-enabled asset tracking (Using Arduino Programming Language) is becoming increasingly critical for companies in all fields. Manufacturers can upload the drug details to the blockchain. Our proposed model improves upon simple warehouse check-in procedures and allows companies to monitor their goods on the move, optimize their vehicle fleets, and keep track of heavy machinery.