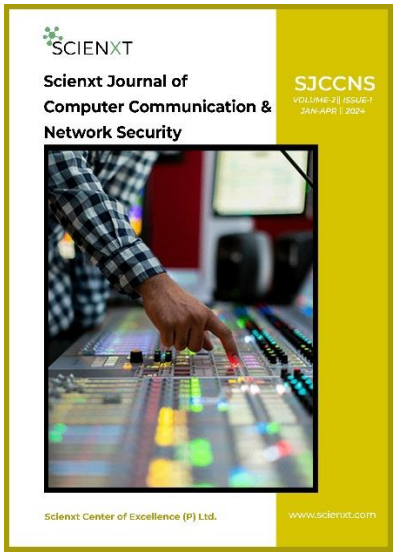

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Optimizing organ donor matching and enhancing transparency through blockchain technology

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Abstract:

Over countless lives have been saved worldwide through the diversionary healing process of organ transplantation. All the same, the process of allocating resources and making gifts has been irritated by certain obstacles, a dearth of clarity, inefficiencies, and worries about the integrity and autonomy of the dossier. By utilizing blockchain electronics' efficiencies to create a safe and comprehensible platform for tool gifting, this project offers a unique solution. Providing a transparent and safe framework for tool distribution and tracking, the project intends to design and develop a way to use blockchain technology. It will be the responsibility of a permissioned blockchain network to ensure privacy and regulate access to sensitive data. It will also speed up the process of recording and listening to gifts of organs, which is one of the most important aspects of benefactor registration, giving donors the best chance, and scheduling transplants. Smart contracts will automate and execute various aspects of the organ distribution process, ensuring fairness and openness, along with corresponding pre- established rules and conditions. Transaction traceability and immutable records provided by blockchain electronics will improve dossier security. Secret dosages and medical records will be kept in an encrypted plan accessible only to those with the proper encryption key and accompanying authorization. This strategy will protect donors' and recipients' privacy by reducing the possibility of data breaches and illegitimate actions. This project's positive exercise has the potential to significantly progress our tool transplantation, conditioning more lives in the process and raising the bar for healthcare as a whole.

Keywords:

Blockchain, Ethereum, Organ donation, Organ transplantation, smart contracts, Traceability.