

Blood and Organ Donation using Blockchain Technology

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Abstract: *In order to ensure a fair and efficient process for organ donation, an end-to-end system is necessary to address the various challenges and requirements related to registration, donor-recipient matching, legal, clinical, ethical, and technical considerations. To achieve this, we propose a solution based on the public Ethereum blockchain, which is fully decentralized, secure, traceable, auditable, private, and trustworthy. Our approach involves the development of smart contracts and the implementation of six algorithms, which we thoroughly test and validate. Through privacy, security, and confidentiality analyses, we evaluate the effectiveness of our proposed solution and compare it to existing solutions.*

Keywords: Blockchain, Ethereum, organ donation, smart contracts

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