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# Trust Modeling Supported by Community Structure of Bitcoin Networks

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# Abstract

The integration of trust modeling with the community structure of Bitcoin networks is a critical aspect of enhancing security and scalability within the ecosystem. This study explores the application of the Fairness and Goodness Algorithm (FGA) to achieve this objective. By leveraging FGA, the research aims to address the challenges associated with identifying and quantifying trust within dynamic communities. The algorithm calculates fairness and goodness values for each user, enabling the establishment of a robust trust model. Through this model, users can make informed transaction decisions, mitigating fraud risks effectively. Moreover, the implementation of FGA paves the way for faster transaction processing within Bitcoin networks. This research underscores the significance of integrating trust modeling with community structures to enhance security, reduce fraud, and improve transaction efficiency in Bitcoin networks.