

Chapter 6

Blockchain and Generative AI for Securing Distributed Systems

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ABSTRACT

Blockchain and AI have revolutionized how distributed systems can work. Combining blockchain and generative ai to enhance data integrity and cooperation in the treacherous field may find innovative ways blockchain and generative AI can develop distributed systems in terms of data integrity, transparency, scalability, security, cooperation, and decision-making. Through an investigation, it is understood how blockchain secures AI models, makes them more transparent and traceable, decen-

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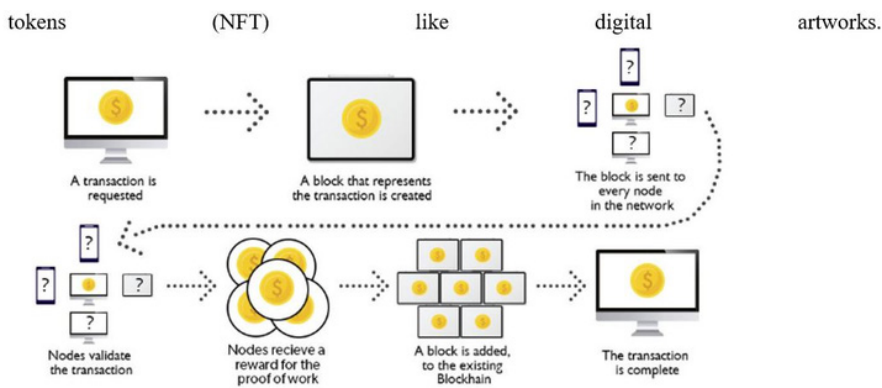
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tralizes training, and makes distributed models more efficient and scalable. Examples from real applications across worlds will guide how blockchain and generative AIs are used in fields such as health, finance, film, supply chains, and electrical transmission. As a result, different sources' knowledge is adopted as proven to propel the process of supplementing blockchain and AI towards a future of intelligent, flexible, and secure distributed systems.

1. INTRODUCTION

A blockchain is a type of computer network that keeps a record of all transactions. Currently, the technology is mostly used to make smart contracts, cryptocurrencies like Bitcoin, and nonfungible tokens (NFT) like digital artworks.

Figure 1. Blockchain Working (GeeksforGeeks, n.d.)



Needless to say that technology is changing rapidly, and we are introduced to new things almost every week. AI and blockchain are disrupting or set to disrupt every facet of business and life. These technologies will revolutionize everything from entertainment to health. However, whereas each technology is sufficient on its own, a group of new and emerging systems may provide incredible, transformative possibilities and benefits. Blockchain is a stable, decentralized database-sharing technology, while generative AI enables machines to learn and be creative. Merging of the two produces intelligent, flexible, and secure systems. Many firms desire to use these solutions to diminish expenses, enhance efficiency, and halt data breach-

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