Adopting Blockchain in Car Trading Platforms: Literature Review

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ABSTRACT

Blockchain technology is an advanced database mechanism that allows transparent information sharing within a business network. A blockchain database stores data in blocks that are linked together in a chain. The data is chronologically consistent because you cannot delete or modify the chain without consensus from the network. As a result, you can use blockchain technology to create an unalterable or immutable ledger for tracking orders, payments, accounts, and other transactions. The system has built-in mechanisms that prevent unauthorized transaction entries and create consistency in the shared view of these transactions. (Amazon, 2023) Blockchain technology has the following main features Decentralization: Decentralization in blockchain refers to transferring control and decision making from a centralized entity (individual, organization, or group) to a distributed network. Decentralized blockchain networks use transparency to reduce the need for trust among participants. These networks also deter participants from exerting authority or control over one another in ways that degrade the functionality of the network. Immutability: Immutability means something cannot be changed or altered. No participant can tamper with a transaction once someone has recorded it to the shared ledger. If a transaction record includes an error, you must add a new transaction to reverse the mistake, and both transactions are visible to the network Consensus: A blockchain system establishes rules about participant consent for recording transactions. You can record new transactions only when most participants in the network give their consent. (Amazon, 2023) This research focus in adopting blockchain technology to buy and sell used cars. So that this platform works to gather all car dealers and allow them to sell without the occurrence of any theft or financial violation, with the issuance of developed and documented smart commercial contracts. This application works to provide a wide space for most car dealers and facilitate the sale process for them while providing the appropriate customer for them or presenting the target group for their goods. This research works to facilitate the sale, purchase, and display of cars to both parties (seller, buyer). Providing an application that works with accuracy and clarity, fully secured from external penetration and phishing. Keeping pace with the current development in providing smart commercial contracts free of defects and errors

Introduction

Numerous advantages of blockchain include decentralization, persistence, anonymity, and auditability. Blockchain applications span a broad range of industries, including cryptocurrencies, financial services, risk management, internet of things (IoT), and public and social services. There isn't a thorough analysis of blockchain technology from both a technological and application standpoint, despite the fact that much research concentrates on implementing the technology in various application aspects. We conducted an extensive survey on blockchain technology to close this gap. The technology behind a lot of digital cryptocurrencies is called blockchain. Blockchain is a network of decentralized, distributed blocks used to store information with digital signatures. Transactions are more secure and tamper-proof thanks to the characteristics of blockchain, including decentralization, immutability, transparency, and auditability. Blockchain technology has applications outside of cryptocurrencies, including risk management, healthcare facilities, and financial and social services. Numerous studies have focused on the potential that blockchain

technology offers in numerous application domains. In this research paper, an electronic platform that works to bring together car dealers with buyers or the target group is discussed. This platform works with blockchain technology that enhances the value of security and non-penetration of smart contracts that the platform will issue after each sale or purchase.

Literature Review

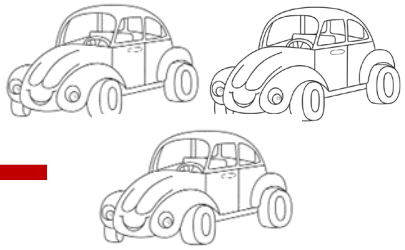
Online trading of used cars is a recent development in the industry for trading in vehicles. (Sustainability,2020) The used car market is a recently developing industry that makes it easier for sellers to sell automobiles and for buyers to buy cars, enabling each side to achieve its goals more easily. Cybersecurity: Automobile dealerships keep a lot of client financial and personal data. This data can be stolen by cybercriminals from the dealership's computer systems and utilized for identity theft, financial fraud, and other illegal actions. Employee theft: Dealerships may face security issues from internal sources as well. Employees may steal cash, vehicles, or customer information, causing financial and reputational damage to the dealership. These are the most important technical problems that car dealers face, so we had to launch a platform that works with blockchain technology that prevents penetration or change in financial data and customer data. We will draw some articles that explain how some projects work using blockchain technology as proof or evidence of the possibility of creating a platform that works with blockchain technology on the ground. Abstract of the first research paper :In used-car purchases, the vehicle information is always asymmetrical, and conflicts are occurred in China. Blockchain technology is utilized to provide a trust mechanism for vehicle information storage and sharing to eliminate conflicts brought on by a transaction's lack of transparency. In an open and honest way. A Blockchain-based vehicle history storing and tracking service called BCVehis is suggested in this work. Abstract of the second research paper: This study uses a used vehicle trading system built on blockchain technology as a case study to examine the potential of these technologies in new environments and business uses. We are dedicated to resolving the issue of lack of confidence and openness in the present used automobile transaction. Blockchain has contributed to enhancing corporate efficiency by assisting in the resolution of issues like trust and data sharing. Through our solutions, we hope to stimulate the used car market and improve the usability of new Internet technologies. Abstract of the third research paper: Whether a transaction takes place in a physical location or a virtual one, trust is an essential element for its success. Blockchain technology is frequently discussed in terms of trust and is referred to as a technology that is trustworthy, trustworthy less, or trust-free. The issue of how to show and demonstrate to end users the reliability of blockchain platforms is still up for debate. Although there may be some real trust in the blockchain technology itself, it is still necessary to build trust in an IT artifact at the application level. In this study, we investigate the implementation of trust-supporting design features to increase an end user's trust in a blockchain network. We adhere to the design science paradigm and propose a set of design components that are realistically valuable and can assist blockchain platform designers in creating more reliable systems.

Methodology

Most of time, many sources are used to collect information that contributes to increasing the strength of the research paper or showing it in a decent scientific manner. The most important and well-known types of sources are primary sources, which include conducting a questionnaire or conducting an interview with an expert in the field, as well as secondary sources, which include searching for information from website, book, or volumes related to the subject. In this research, I followed the interview with a car dealer as a primary source, to know the mechanism used during buying and selling in the world of cars. I also interviewed a person interested in blockchain technology and how to apply it to a unique platform that works with different features. In addition, I searched electronic websites to use it to as a secondary source in the report. Where I used about 4 websites that explain the main idea of the blockchain, the advantages of the blockchain and how to include it in any work.

Results

A platform for buying and selling cars using blockchain technology.



Used cars + Sellers.

Buyers.

A platform using blockchain technology that collects used car dealers in the target category for their goods, as well as works on a reliable security principle with time, date, and day so that no one can hack the platform or manipulate the data in it.

Blockchain is an excellent technology for storing financial records or any other type of data because it is immutable and needs a lot of processing power to update.

By eliminating intermediaries and third-party fees, blockchain eliminates the danger associated with putting all your confidence in one company or institution. It also lowers

In contrast to other traditional databases, which can be banned and monitored by their owner, blockchain is a decentralized technology, which means it is not subject to any

Conclusion

In the world of used car trading, the buyer usually faces difficulty in finding the type of car that suits him, and the seller also finds it difficult to sell his goods or cars, due to the difficulty in finding the target group or the lack of a technical platform that facilitates this mechanism in the world of used cars. Therefore, the time has come to create a technical platform that works to bring sellers together with buyers. It is worth mentioning that blockchain technology is one of the most important technologies that the world is now working to apply in all areas of life, due to its various advantages that help to save data from damage and not to be hacked or falsified.

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