CAREER OPPORTUNITIES IN CRYPTOCURRENCY & BLOCK CHAINING

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Abstract:

Block chain technology applied to cryptocurrencies is the dominant factor in maintaining the security of cryptocurrencies. This article reviews the technological implementation of cryptocurrency and the security and stability of cryptocurrency and analyzes the security support from block chain technology and its platforms based on empirical case studies. Our results show that the security support from block chain technology platforms is significantly insufficient and immature. Moreover, these platforms provide computational resources and benefits to the consensus algorithm selection for block chain practitioners. Second, encryption ensures the security of cryptocurrencies. On the one hand, the digital signatures identify the identity of the signatory and the transaction.

Introduction:

Cryptocurrency, owing to its rarity and ability to prevent overabundance and inflation, has drawn a large number of speculators, including those with trading experience and novices in trading operations, and has gradually been applied in the financial sector. Cryptocurrencies are diverse owing to various distinct cryptocurrency protocols. In 2021, the market contains over five thousand tokens of different cryptocurrencies, even though most of them are not in demand because of their poor capitalization and the same technique as their predecessors. Specifically, consider that the first five cryptocurrencies, Bitcoin (BTC), Ethereum (ETH), Tether (USDT), Cardano (ADA), and Binance Coin (BNB), hold 45.81%, 17.11%, 4.16%, 3%, and 2.9% of the global cryptocurrency market capitalization, respectively, adding up to approximately 81.5%, which can be used as proxies for cryptocurrencies.

The underlying technology behind cryptocurrencies is block chain, which is treated as an immutable distributed ledger. Block chain technology has been portrayed as the "next-generation Internet" and "new foundational technology". In addition, compared to traditional state-sponsored currencies, cryptocurrency may have the ability to perform micro transactions and then solve the economic gap. However, the application of block chain technology, such as many cryptocurrencies that are distributed autonomous organizations (DAOs) and based on the top of block chain infrastructures, is characterized as "Ponzi schemes." Block chain technology is the single most disruptive to financial and economic systems.

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Third, cryptocurrency improves financial efficiency and makes digital transactions widespread. For international transactions, cryptocurrencies can quickly respond to emergency transaction needs through peer-to-peer systems. Then, the efficiency of cryptocurrency would be greatly enhanced once trust issues are resolved. For example, cryptocurrency markets have high liquidity and are evolving.

The instruments used as exchange instruments to make the trade transactions as easy as possible according to the market needs have experienced huge development and change. Those instruments used to intermediate the exchange of goods are known as money. Money is something that serves as a medium of exchange, a unit of accounting, and a store of value. Money is a medium of exchange in the sense that we all agree to accept it in making transactions. Merchants agree to accept money in exchange for their goods; employees agree to accept money in exchange for their labor. As a unit of accounting, money provides a simple device for identifying and communicating value.

Types of Cryptocurrency is designed to work as a medium of exchange. The number of cryptocurrencies available over the internet is over 1600 and growing. A new cryptocurrency can be created at any time. By market capitalization, Bitcoin is currently the largest block chain network, followed by Ripple, Ethereum and Litecoin.

1. **Bitcoin (BTC):**

    One of the most commonly known currencies, Bitcoin is considered an original cryptocurrency. It was created in 2009 as an open-source Software. Using block chain technology, Bitcoin allows users to make transparent peer-to-peer transactions. All users can view these transactions; however, they are secured through the algorithm within the block chain. While everyone can see the transaction, only the owner of that Bitcoin can decrypt it with a "private key" that is given to each owner. Unlike a bank, there is no central authority figure in Bitcoin. Bitcoin users control the sending and receiving of money, which allows for anonymous transactions to take place throughout the world.

2. **Litecoin (LTC):**

    Litecoin was launched in October 2011 as an alternative to Bitcoin. Like other cryptocurrencies, Litecoin is a peer-to-peer cryptocurrency and open source-source software project released under the MIT/X11 license. Its creation and transfer is based on an open source cryptographic protocol and it is completely decentralized. Litecoin is different in some ways from Bitcoin. A few differences between these digital currencies are: The Litecoin network aims to process a block every 2.5 minutes but Bitcoin takes 10 minutes. This allows Litecoin to have faster transaction confirmation. The coin limit for Bitcoin is 21 million and Litecoin is 84 million.

3. **Ethereum (ETH):**

    Ethereum is a type of cryptocurrency which was proposed in late 2013 by VitalikButerin, a crypto currency researcher and programmer. It was initially released in July 2015. It is an open source platform based on block chain technology. While tracking ownership of digital currency transactions, Ethereum block chain also focuses on running the programming code of any decentralized application, allowing it to be used by application developers to pay for transaction fees and services on the Ethereum network.

4. **Ripple (XRP):**

Ripple is a real-time gross settlement system, currency exchange and remittance network created by Ripple Labs Incorporation, a US based company. Ripple was released in 2012 and acts as both a cryptocurrency and a digital payment network for financial transactions. It's a global settlement network that is designed to create a fast, secure and low-cost method of transferring money. Ripple allows for any type of currency to be exchanged, from USD and Bitcoin to gold and EUR and connects to banks, unlike other currencies. Ripple also differs from other types of digital currencies because its primary focus is not for person-to-person transactions, rather for moving sums of money on a larger scale.

1. **Bitcoin Cash:**

Bitcoin Cash is a type of digital currency that was created to improve certain features of Bitcoin. Bitcoin Cash increased the size of blocks, allowing more transactions to be processed faster.

2. **Ethereum Classic:**

Ethereum Classic is a version of the Ethereum block chain. It runs smart contracts on a similar decentralized platform. Smart contracts are applications that run exactly as programmed without any possibility of downtime, censorship, fraud or third-party interface. Like Ethereum, it provides a value token called "classic ether," which is used to pay users for products or services.

Objectives of the Study:

1. Cryptocurrency is a decentralized finance system that's become increasingly popular with investors, businesses and people interested in finance. Cryptocurrencies like Bitcoin allow people outside of the finance industry to pursue new investment opportunities. These currencies are entirely digital, and as more people and businesses use them, the demand for jobs in cryptocurrency development, support and trading is rising.

2. As blockchain is termed as one of the fastest-growing skill sets, the number of jobs is coming up at a certain pace. That is why blockchain professionals' salaries are higher than IT professionals. Despite the fact that there are many career opportunities, people are still not very aware of them.

Research Methodology:

The research is completely based on secondary data which is collected through the published sources, magazines, journals, websites and books.

Scope of the Study:

Blockchain technology has a great future worldwide. An incredible scope of Blockchain technology has been observed in the financial field. The financial organizations were not able to sufficiently handle the heavy workload after demonetization and thus brought out the problems of having a centralized specialist for handling the financial transactions.

Review of Literature:

Hileman, Garrick &Rauchs, Michel. (2017) in their Global Cryptocurrency Benchmarking Study focused on alternative payment systems and digital assets. It examined the burgeoning global cryptocurrency industry and its key constituents, which include exchanges, wallets, payments and mining. The research team collected data from cryptocurrency companies and organizations across 38 countries and five world regions from

September 2016 to January 2017.

Dourado, Eli & Brito, Jerry. (2014) in their article „Cryptocurrency" discusses about Problems that have plagued digital cash in the past and the technical advance that makes Cryptocurrency is possible.

Yli-Huumo J, Ko D, Choi S, Park S, Smolander K (2016) in their study „Where Is Current Research on Blockchain Technology? Systematic Review" analyzes challenges and future directions regarding Blockchain technology from the technical perspective.

The results show that focus in over 80% of the papers is on the Bitcoin system and less than 20% deals with other Blockchain applications including e.g. smart contracts and licensing.

Chan, Stephen; Chu, Jeffrey, Nadarajah, Saralees and Osterrieder, Joerg (2017) in their study ‗A Statistical Analysis of Cryptocurrencies' analyzed statistical properties of the largest cryptocurrencies (determined by market capitalization), of which Bitcoin is the most prominent example.

Working of Block Chain:

A. The block chain is a distributed database in simple terms, the block chain can be thought of as a distributed database. Additions to this database are initiated by one of the members, who creates a new "block" of data, which can contain all sorts of information. This new block is then broadcasted to every party in the network in an encrypted form so that the transaction details are not made public. Those in the network collectively determine the block's validity in accordance with a predefined algorithmic validation method, commonly referred to as a "consensus mechanism". Once validated, the new "block" is added to the block chain, which essentially results in an update of the transaction ledger that is distributed across the network. In principle, this mechanism can be used for any kind of value transaction and can be applied to any asset that can be represented in a digital form.

B. Transaction "blocks" are signed with a digital signature using a private key every user on a block chain network has a set of two keys. A private key, which is used to create a digital signature for a transaction, and a public key, which is known to everyone on the network. A public key has two uses: 1) it serves as an address on the block chain network; and 2) it is used to verify a digital signature / validate the identity of the sender. C. Bye-bye middleman? One of the key advantages of block chain technology is that it allows to simplify the execution of a wide array of transactions that would normally require the intermediation of a third party. In essence, block chain is all about decentralizing trust and enabling decentralized authentication of transactions. Simply put, it allows you to cut out the "middleman".

Conclusion:

Cryptocurrencies are a hot topic in the global financial system. There is great volatility of cryptocurrencies exchange rates. With this, there is a high risk of trading these cryptocurrencies. Their growth has been able to gain the attention of many speculators. They are easily portable. It is only after the required trust in the cryptocurrencies after which they will be used on a wider scale. If the cryptocurrencies fail to gain that trust, then their boom might decline. They are still in their infancy, and it's not sure as to when they will be maturely traded in the markets globally. Many different cryptocurrencies have gained the required attention. Some nations have started to issue national cryptocurrencies. It is quite possible that shortly, bitcoins might have a way for cryptocurrencies to flourish. Despite the flaws, bitcoins are still considered tour-de-force in the digital currency.

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It has provided an alternative currency for the less developed countries and has opened the doors of economic transformation. In this way, it gives the individuals more choices to manage their finances. Without regard to bitcoins accomplishing the lofty transformations, the cryptocurrencies are seen to be entering the financial stage and changing the global financial landscape forever.

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