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Cryptocurrency: A New Investment Alternative

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I. INTRODUCTION

Virtual currency is a type of unregulated digital currency that is only available in electronic formThe term came into existence around 2012, when the European Central Bank (ECB) defined virtual currency to classify types of “digital money in an unregulated environment, issued and controlled by its developers and used as a payment method among members of a specific virtual community".

The legality of Virtual Currency varies from country to country. Since Virtual Currency has little to no supervision from a third party jurisdiction such as a Central Bank, which is the case for regular currencies, it has not ruled in favour of many governments organisations.

One of the main reasons why financial regulators are choosing not to accept Virtual Currency as a mode of transaction in their countries is because it poses certain unique threats such as terrorism funding, threat to market integrity, severe lack of consumer and investor protection, etc. which may damage financial stability.("Cryptocurrency and security", n.d.).

The United States of America allows the trade of Virtual Currency, only under strict supervision and regulation by The Commodities Futures Trading Commission.

The European Union has not granted Virtual Currencies the legal status of currency, nor money. It depends on the status of digital assets in the EU or a member state("list of countries where Bitcoin/ICO/Cryptocurrency is legal & Illegal", 2019).

In India, The Reserve Bank of India has completely banned the usage of virtual currencies, both directly and indirectly, by the entities regulated by the RBI. However, this ruling was challenged by The Internet and Mobile Association of India, due to which the end result reflects no clarity on the aspect of cross border virtual currency trading.(NEWS & News, 2019).

Cryptocurrency is a digital or virtual currency in a digital medium of exchange. It was launched in 2009 by an individual or group, who refer to themselves as Satoshi Nakamoto. It was created in the wake of the 2008 Global Financial Crisis as a way for people to control their money without relying on any company, bank or government, owing to a newfound lack of trust.("The Evolution of Cryptocurrency", n.d.). Bitcoin was the first Cryptocurrency which was created in the year 2009.Bitcoin makes up 63.8% of crypto’s market value. Cryptocurrency uses cryptography which is a method to encrypt and decrypt financial data to secure communications in the presence of third-parties with ill intentions.There are currently 5,201 cryptoassets.The crypto market has a total market capitalization of over $155 billion ("Crypto in Numbers: 50+ Cryptocurrency Statistics and Facts | Finivi", 2020).

Security is one of the major concerns for cryptography users and investors. While cryptographers claim that each unit of currency is encrypted with the help of highly advanced coding to ensure safety, there is no denying that there have been numerous attempts in the past wherein hackers have hacked digital wallets of investors, and partaken in crimes such as phishing, supply chain hacking, and scamming, resulting in the loss of millions of dollars.

In the first quarter of 2019, the amount of losses due to hackers in the virtual currency system amounted to USD 1.2 billion, further stimulating the already existing fear of virtual currency amongst the general public.

In terms of legality, in 2020, the Supreme Court of India has lifted its initial ban on cryptocurrency, thereby rendering it with a legal status in India. Cryptocurrency had been banned in 2018, and after two years of Indian enthusiasts fighting in favour of Cryptocurrencies, their case against the RBI was finally won, and the Supreme Court of India passed a judgement declaring that the trading of Cryptocurrency would now be legal in India.

Despite its variations in legality, there is no denying that Cryptocurrency is fast growing in terms of popularity, with a current market evaluation of USD 1.05 billion, with a projected growth to USD 1.40 billion by 2024.

This study addresses the volatility of cryptocurrency. The market itself is unpredictable in nature owing to the fact that any relatively small transaction would impact the whole currency. While this results in consumers hesitating to invest in cryptocurrencies, speculative traders, on the other hand, depend on the volatile nature of cryptocurrency to invest big, and earn bigger profits, even while risking major losses at the same time.

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The purpose of this study is to determine not just the feasibility, but also the economic benefits that may be reaped by investing in cryptocurrencies through a thorough investigation of the various factors that may influence its financial functions.

This study aims to focus on the volatility of cryptocurrency. With the lift of the ban on Cryptocurrency in India, the number of people trading in cryptocurrency will see a sharp rise in 2020, and since it has higher liquidity levels, the cryptocurrency would be sold at a much faster rate. Since the number of bitcoins in circulation is limited, and is seeing a rapid growth in the number of number of users of Cryptocurrency, there is considerable evidence that points to Cryptocurrency serving as a viable investment alternative.

II. REVIEW OF LITERATURE:

This study expands on the introduction of cryptocurrencies to the world, and its rising fame with investors all over the world. It analyses the market of cryptocurrencies, and the extent to which it serves as a factor to the performance of this digital mode of transaction. Cryptocurrencies essentially require minimal or no fees as a condition to start trading, which can be viewed as one of its many advantages, others of which may include removing the obstacles which regular currency and exchange rates predominantly have. Bitcoin, being the most popular form of cryptocurrency, is specifically studied with instruments such as the SWOT analysis method.(Devries, 2016).

Due to the rapid digitalisation of the world in almost all life functions today, this study explores the phenomenon of virtual currency, how it is being used by different individuals or groups, not just for regular digital trading activity, but also for other online actions like games, networking, etc. It studies what consumers really want as expectations from cryptocurrency, and their level of comfort in trading in it, given that it is technically unregulated by a third party financial institution, which may, from consumer's perspective, leave them more prone to cyber attacks. The international legality of Cryptocurrency is also explored, with an aim to measure its impact, if any, in the laws regarding the same, in India. (Jani, 2018).

The study analyses the introduction of cryptocurrencies into the world, its effect on the global financial market and its functions, and also the extent of its impact, if any, on industrial and business activities which are vulnerable to any change in market dynamics. This paper focuses on the socio-economic impact of cryptocurrencies in the world to measure its societal welfare and accordingly determine its feasibility. Economic sustainability is another factor which is studied in detail.(Giudici, Milne & Vinogradov, 2019).

The respective authors have devised an equilibrium model to study the blockchain technology adopted by cryptocurrencies for financial data facilitation. The entire purpose of this model is to study the cryptocurrency system in order to prove that it does experience losses to the tune of 1.4%, which can easily be reduced if certain changes were made to the system in order to optimise its functioning. This study also claims that unlike regular financial markets, cryptocurrencies currently do not enjoy the capacity to support final and immediate currency settlements. The process of mining, which involves user-to-user transaction verification followed by final entry into the public ledger, is also studied in depth.(Chiu & Koeppl, 2017).

This study analyses the difference between cryptocurrencies, and regular financial markets. It identifies the various factors that contribute to the uniqueness of cryptocurrencies, specifically Ripple, Ethereum, and Bitcoin. It expands on the risks, as well as returns associated with these cryptocurrencies. Different tools associated with the cryptocurrency market can be used to predict the future of market conditions. This study also sheds light on US and China industries which are exposed to, and trade in cryptocurrencies.(Liu & Tsyvinski, 2018). This study focuses on the assessment of the role and impact of Bitcoin. It is an exploratory research on Bitcoin and its impact on the future of India. The study tells us that cryptocurrency can serve as a great financial tool. It tells us that even though there are some drawbacks in cryptocurrency it is a boon if it is used effectively. If it is legalised in India it would help in the progressive growth of India. Cryptocurrency has the ability to replace the traditional monetary system as many firms have started to accept bitcoin.(Jaideep & Jyoty, 2019).

This study Is about cryptocurrency as an investment instrument in the modern financial market. The main hypothesis of this research is that modern portfolio theory can be applied to design an investment portfolio with appropriate risk and profitability characteristics. It also tells that can increase the effectiveness of an investment portfolio in part by lowering portfolio variance. With the increasing interest in cryptocurrency, it can be considered as a legitimate investment instrument. However, due to the volatility of cryptocurrency, it is advised that the investment portfolio should be monitored in real-time and constantly adjusted. (Saksonova & Kuzmina-Merlino, 2019).

The study is about the volatility of cryptocurrency and comparison of three cryptocurrencies Bitcoin, Ethereum and Litecoin and also understand their trends in recent times. Cryptocurrency is being used across the world for various transactions which are legal and illegal. From the data analysis, it's found that Bitcoin is more consistent than the other two cryptocurrencies. From this study, it has been concluded that bitcoin has the highest volatility and it shows that the prices of bitcoin show a declining trend at the same time the prices of Ethereum and Litecoin show an increasing trend. (Bhosale& Mavale ,2018).

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The study focusus on the awareness and perception of cryptocurrency in Bangalore. The study aims to determine the willingness of people to choose cryptocurrency as an investment tool and also the future prospect of cryptocurrency and how people perceive cryptocurrency in India. It was concluded from the study that many people are aware of cryptocurrency but are not willing to invest in cryptocurrency due to the lack of regulation from government and regulatory authority. If the government of India and the regulatory authorities come forward to regulate the transactions it can play a key role in the entire investment portfolio.(Shukla & A, 2019).

This study is about Bitcoin as a future transaction currency. Bitcoin has gained immense popularity within two years of its start. It is a digital currency which uses cryptography and blockchain to secure its transactions. Recently, after 2015, it has gained more attention due to his increasing value and volume of exchange. It has attracted substantial interest in recent years from the general people, risk-takers, profit-seekers, academic practitioners and economists. It is believed that Bitcoins does have the prospective for a greater universal acceptance owing to its quick, cheap and convenient transactions.(Hosain & Sajjad, 2018).

III. RESEARCH METHODOLOGY

This research study will be based entirely on qualitative data. The various factors contributing to the very nature of cryptocurrency will be scrutinised in order to come to a definite conclusion; whether it is in fact, going to be a new investment alternative for the world, and not just a currency that is traded by a select few figures.

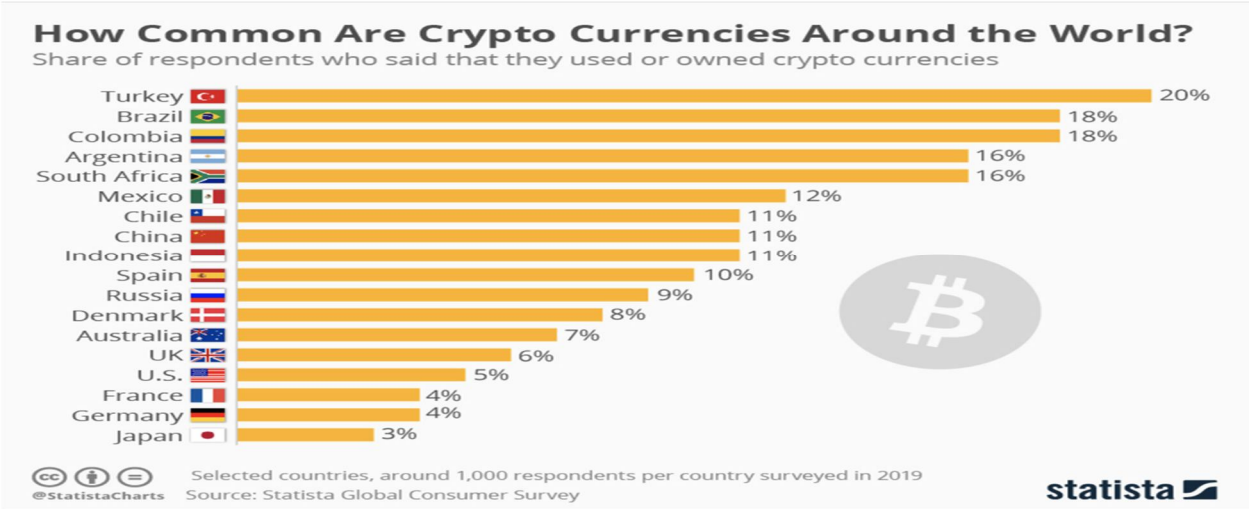
The data collected will be secondary in nature. Information from established financial data websites, along with governmental reports, will be referred to.

In reference with the location of study, this research project does not have any geographical limitations. Its aim is to determine the future significance of cryptocurrency on an international level.

IV. DATA ANALYSIS

Data was gathered and scrutinised rom reliable sources with the collective object of determining whether cryptocurrency would be a an investment alternative in the near future.

A. Global Usage



(Report: Asian Nations are Increasing Cryptocurrency Usage - Asia Crypto Today, 2020)

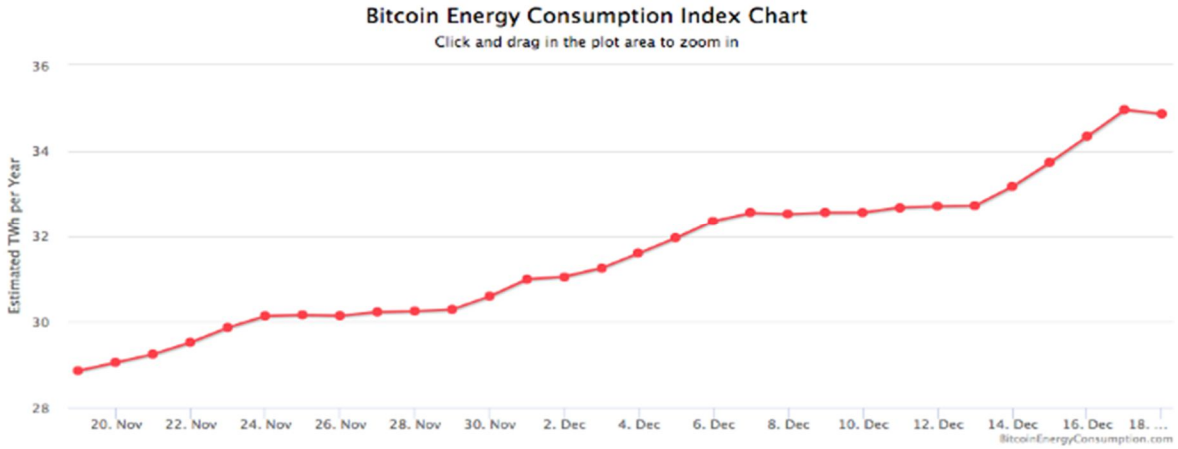
The acknowledgement and subsequent usage of cryptocurrency has been steadily rising ever since its launch in 2008. Although a significant number of countries were apprehensive about the safety, security, and minimal regulation of such a novel form of financial trading, many countries welcomed it with open arms, looking at cryptocurrency as a new and trustworthy form of digital money to offer its citizens.

In 2019, the cryptocurrency market had an estimation of approximately USD1.03 billion in 2019 and by 2024, this amount is expected to reach USD1.40 billion, with a compound annual growth rate of approximately 6.18% during its forecast duration. (Market, 2018).

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1) *Asia*
2) *India:* India initially took a skeptical and distrusting stance towards cryptocurrency. However, since 2016, when demonitisation took place, its political and economic conditions became ideal to accept cryptocurrency. It is reported that in 2019, more than 500 traders, along with the top five Indian companies which included Dell, have started to accept cryptocurrency as a form of digital payment. The number of cryptocurrency traders in India is reported to have crossed 6,00,000.(The Future of Cryptocurrencies in India, 2020). In Lebanon, due to current economic and socio-political situations, the use of cryptocurrency is thriving. However, it might come to a prompt end, as in the case of Iran, which declared the mining of cryptocurrency to be illegal in all forms. (Road to Consensus: Middle East May See a Bitcoin Revolution, 2020). Other countries like Kuwait, United Arab Emirates, Bahrain, Kingdom of Saudi Arabia have also chosen to adopt a friendly nature towards cryptocurrency by allowing it to function in certain industries such as tourism, digital finance, etc.(The rise of cryptocurrency in the Middle East, 2019). Countries like The Sultanate of Oman have not yet accepted Cryptocurrency, but have made recent developments in blockchain technology.(Is Oman Ready for Cryptocurrency? | Businessliveme.com - Business News Middle East | BLME, 2019)
3) *North America:* In the United States of America, cryptocurrency has not retained a good position in the minds of financial traders, as it has been reported that only a mere 8% of Americans do in fact, trade in some form of cryptocurrency, Bitcoin being the most popular.(Nova, 2018). In Canada, Cryptocurrency is allowed to be traded by companies and individual persons, however, it possesses the sole status of a legal tender only, which restricts it functions.(Regulation of Cryptocurrency, 2020).
4) *Europe:* In Germany, cryptocurrency is reported to be a huge hit, especially amongst the youngsters aged between 18-21 years, despite its already thriving economy. Italy regulates its cryptocurrency sanctions by involving its Ministry of Economy and Finance in all the decision making related to it. Italy has seen a boom in cryptocurrency ever since its introduction, particularly Northern Italy. While it is reported that Italians usually prefer their transactions in cash the best, a significant number of the population is involved in trading cryptocurrencies. (How EU and 5 European Nations Regulate Cryptocurrency | Regulation Bitcoin News, n.d.). Russia recently passed a new crypto-bill allowing cryptocurrency to occupy a legal status in the country. However, it is still not permissible to trade in cryptocurrency.(Strizh, Dmitriev and Kiseleva, 2020)
5) *Africa:* Africa is seeing a huge rise in cryptocurrency trade, especially in countries that suffer from high inflation. The main currencies being traded are Bitcoin, XRP, Lisk, Dash, Litecoin and Monero. The countries with extremely high inflation resulting in citizens turning to cryptocurrencies include South Sudan, Egypt, Malawi, Ghana, Mozambique, Nigeria and Zimbabwe. While the governments of several African countries have warned against the usage of cryptocurrencies, they have admitted that they have to authority to ban it, thereby powering citizens to make us of it.(Rao, 2018)
6) *South America:* Venezuela, a country which has been suffering from severely high inflation rates for the past four years, has been pushing for the promotion of cryptocurrency to serve as an alternative form of payment. A casino has been set up which deals exclusively with certain cryptocurrencies, to encourage citizens to switch to this form of digital payment. Nicolas Maduro, President of Venezuela, has continuously pushed for different sectors of the country such as Finance and Health, to adopt cryptocurrency and take up the responsibility to act as promoters for it as well.(Regulation of Cryptocurrency, 2020).

B. Environmental Sustainability



("The Environmental Impacts of Bitcoin", 2017).

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Since Cryptocurrencies are essentially visible, it's natural to assume that they are, therefore, eco-friendly. However, it's quite the opposite. Cryptocurrency mining results in the emissions of carbon dioxide, and with the increase in global usage, these emissions are growing larger and larger by the year.

Cryptocurrencies require continuous operations from extensive computer networks to design and solve algorithms, thereby forming blockchain softwares. These operations rely heavily on fossil fuels, thereby depleting resources by a very large extent. ("Environmental footprint of cryptocurrency — Cambridge Institute for Sustainability Leadership", 2019).

However, there are reports that the current energy mechanism, called Proof of Work(PoK) will be changed to Proof of Stake(PoS) mechanism, which is said to consume a significantly lesser amount of energy.

Governments do have the power to regulate the energy consumption of cryptocurrencies being availed in the respective country, to a certain extent. ("How Sustainable is Bitcoin? | Innovation Warehouse", 2019).

There are some cryptocurrencies which serve the purpose of acting as an environment-friendly form of currency, such as SolarCoin, which runs entirely on generators powered by solar energy. It reportedly possesses 97,500 Terrawtt hours of solar energy in its reserve. EnergyCoin is another type of "Green Coin" which makes use of Proof-of-Stake energy mechanism for its functioning, thereby minimalising its carbon footprint. People interested in trading EnergyCoins are required to present their renewable energy certificates.("Sustainability is the New Cryptocurrency | TheSustainabilist", 2019).

V. CONCLUSION

The various factors of cryptocurrency have been thoroughly scrutinised with the main objective of determining whether or not, it can truly be pursued as an alternative form of investment in the near future, on a global basis.

The findings of the study were derivatives of four main topics discussed, which involved Global Usage, Volatility, Technological Security and Environmental Sustainability. The current global usage of cryptocurrency indicates that there is in fact, an upward trend in the number of traders per year, with BitCoin taking the lead. It is predicted that the number is set to rise in the future as well, with more and more people taking an interest, and the risk to trade in this newest form of digital transaction.

It was observed that the volatility of cryptocurrency was driven by several factors, both internal and external. It is in the very nature of cryptocurrencies to be vulnerable to even the slightest change in the market. In the case of external forces, speculators are constantly trying to predict the degree of volatility, which ends up affecting the cryptocurrencies themselves. Hence it can be concluded that there is a greater risk involved in investments related to cryptocurrencies due to the high cost of trading and its sensitive nature towards market forces. Cryptocurrencies employ blockchain technology software, which consists of extensive networks of algorithms which are continuously developed and simultaneously solved by computer networks. Although this technology is based on a very high degree of encryption, which is reported to be one of the safest softwares, there have been numerous episodes of malpractices involving theft and misuse of cryptocurrencies in the digital wallets of traders.

Safety is one of the key concerns of people when it comes to investing in cryptocurrency. Yet, one may argue that trading in cryptocurrencies is just as safe as doing so in regular forms of financial activity.

There is a common misconception that cryptocurrencies are virtually eco-friendly, since it operates on a digital platform, and it is not tangible in nature. However, it is just the opposite. Cryptocurrencies make use of a large amount of fossil fuel derived energy for its operations, and emit a huge amount of carbon dioxide gas as well. Hence, it can be concluded that cryptocurrencies are in fact, dangerous to the environment to an extent. However, there are new forms of cryptocurrencies such as Solarcoin and Energycoin which have switched to Point-of-Stake, which is a much more eco-friendly operational mechanism.

In conclusion, it can be inferred that cryptocurrency, while having certain setbacks in various fields such as volatility and security, can be viewed as a feasible option for investment in the future.

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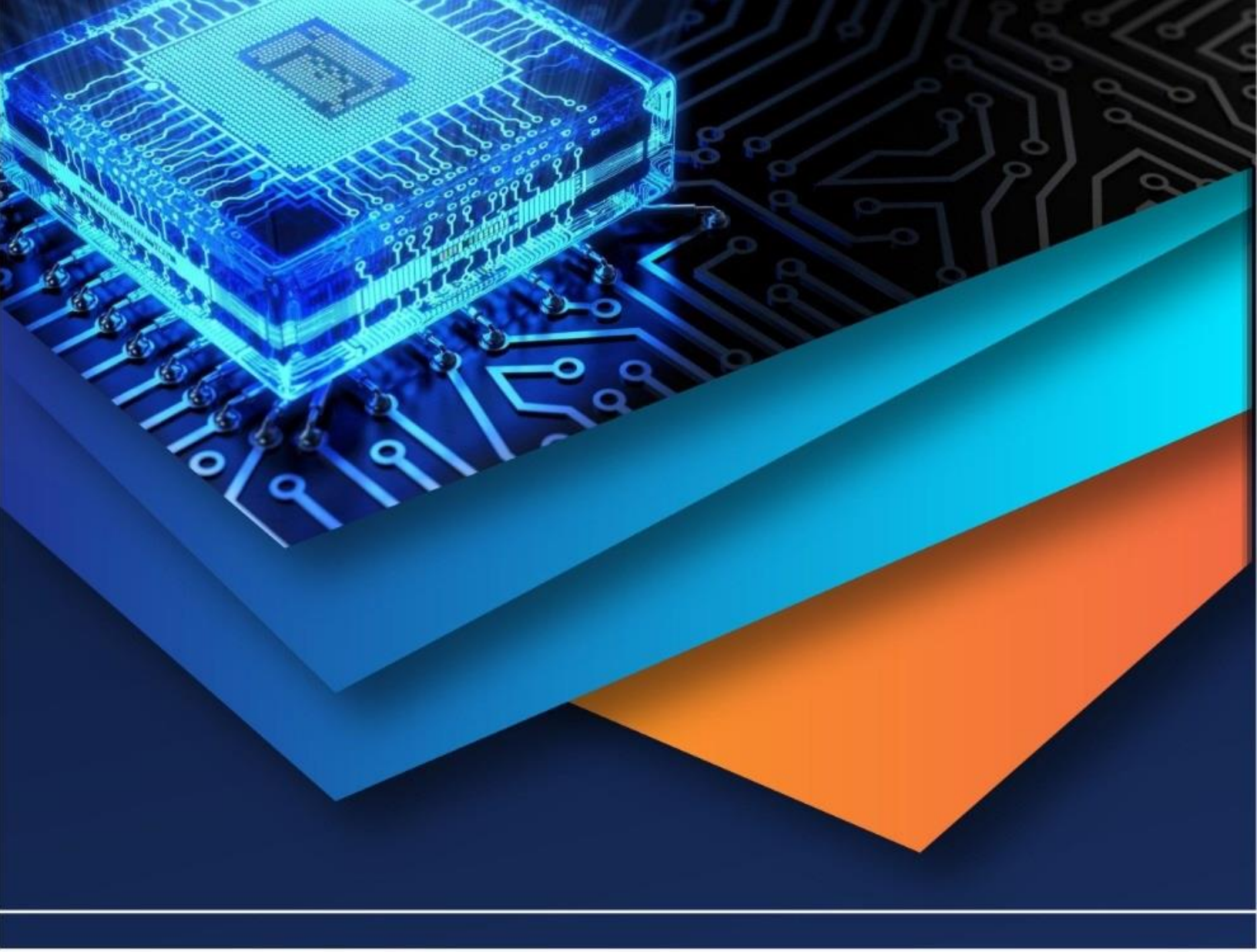
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