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ABOUT US

"Journal of Unique Laws and Students" (JULS) which shall provide law students, young lawyers and legal professionals to deliberate and express their critical thinking on impressionistic realms of Law. The JULS aims to provide cost free, open access academic deliberations among law students and young lawyers. The ISSUE II of Volume 1 focuses on three themes i.e. (i) Artificial Intelligence and Block chain in Law (ii) Intellectual Property Rights and Media, and (iii) Laws applicable to the intermediaries.

The journal strives to contribute to the community with quality papers on a vast number of legal issues and topics written by authors from various groups that have been reassessed and revised by our editorial team to reach the highest possible standard.

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Research Title: CONVERGENCE OF BLOCK CHAIN AND ARTIFICIAL INTELLIGENCE

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ABSTRACT

Artificial Intelligence (AI) and blockchain have recently been two of the most popular topics. Artificial intelligence (AI) and blockchain are two of the most trending innovations that would radically alter how we live, function, and communicate.

The author attempts to understand the fundamentals of block chain and artificial intelligence, as well as why these technologies are so common, and what technical revolutions these two technologies will bring together. Like for every coin, there are two sides and this technology has certain drawbacks, flaws, and security concerns, which the author has discussed briefly.

Key words- *block chain, technology, technology, artificial intelligence*

RESEARCH QUESTIONS-

1. Can the merged block chain and AI transform our daily life enormously?
2. What is the most recent AI block chain application or development?
3. How Artificial Intelligence and Blockchain are regulated in India?

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INTRODUCTION

Block chain and artificial intelligence (AI) are two of the most widely used technical innovations today. Despite the fact that the two systems' creation entities and implementations are vastly different, researchers have been discussing and investigating the possibility of combining them. Artificial intelligence and block chain are becoming increasingly important in the fourth industrial revolution. Block chain has the potential to transform the economic system's architecture, and AI can be said to be founded on the 4th industrial revolution's fundamental framework. We should assume that the combined strength of these two systems can be used to assess the fourth industrial revolution's depth and growth.[1] To fully comprehend the wonders of AI and block chain when combined, we must first define AI and block chain

WHAT IS ARTIFICIAL INTELLIGENCE (AI)[2]

An AI would appear to the average person as a terminator-like figure from all of the movies we've seen, but if you ask an expert, an AI would be described as systems that are programmed to perform intelligent functions that were previously performed by humans. For a system to be an Artificial intelligence (AI) it needs to fulfil these conditions –

- A human-created intellectual being capable of executing functions intelligently without being directly told.
- Capable of logical and humane reasoning and action.

HISTORY OF AI

The history of Artificial Intelligence (AI) dates back to antiquity, when myths, legends, and rumours circulated about master craftsmen endowing artificial beings with intelligence or consciousness. Classical philosophers tried to characterize the mechanism of human thought as the mechanical manipulation of symbols, which sowed the seeds of modern AI. The programmable digital computer, a system built on the abstract essence of mathematical logic, was invented in the 1940s as a result of this work. This computer, as well as the concepts

[1] Prof Ahmed Banafa ,*Blockchain and AI: A Perfect Match?*, OpenMind BBVA, [May 16, 2021 3:50 P.M], https://www.bbvaopenmind.com/en/technology/artificial-intelligence/blockchain-and-ai-a-perfect-match/

[2] Vaishali Advani - et al., *What is Artificial Intelligence? How Does AI Work, Applications and Future?*GreatLearning Blog: Free Resources what Matters to shape your Career! (2021), [May 16, 2021 4:15 P.M], https://www.mygreatlearning.com/blog/what-is-artificial-intelligence/

behind it, prompted a group of scientists to seriously consider the possibility of creating an electronic brain.

During the summer of 1956, a workshop on the Dartmouth College campus launched the field of AI science. For decades, those who attended will be at the forefront of AI science. Many of them believed that in less than a century, a computer as intelligent as a person would exist, and they were given millions of dollars to make this vision a reality.[3]

It became clear later that they had grossly underestimated the project's difficulty. The US and British governments stopped funding undirected artificial intelligence research in 1973, in response to criticism from James Light hill and continuing congressional scrutiny, and the difficult years that followed became known as the "AI winter." Seven years later, a bold plan by the Japanese government encouraged governments and industry to spend billions of dollars in AI, but investors were disillusioned by the late 1980s and withdrew funding once more.[4]

Investment and interest in AI was successfully applied to many problems in academia and industry in the first decades of the twenty-first century, thanks to modern methods, the use of strong computer hardware, and the collection of massive data sets.

USES OF AI

The aim of artificial intelligence is to augment human capabilities and aid us in making complex decisions with far-reaching consequences. Currently, the purpose of Artificial Intelligence is the same as it has been for the last thousand years with all of the technology and techniques we've developed: to minimise human initiative and assist in decision-making.

In order to gain insights into customer behaviour and make data-driven decisions, AI is being used in a number of fields. For example, Google's predictive search algorithm used past usage data to predict what a user will type next in the search bar. Netflix uses previous experience data to recommend what movie a user should watch next, keeping them glued to the web and extending their viewing time. Let's take a look at how artificial intelligence is enhancing people's lives around the board.[5]

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[3]AITopics, A Brief History of AI, [last visited May 16, 2021], https://aitopics.org/misc/brief-history

[4] Steven Nuñez, *A brief history of artificial intelligence InfoWorld (2020)*, Info World.com, [May 16, 2021 4:35 P.M], https://www.infoworld.com/article/3527209/a-brief-history-of-artificial-intelligence.html

[5] Leeway Hertz (2021), [last visited May 16, 2021], https://www.leewayhertz.com/ai-applications-across-major-industries/

HEALTHCARE:

1. **Administration**: Artificial intelligence (AI) programmes are assisting with day-to-day administrative tasks in order to reduce human error and boost productivity. NLP is used to transcribe medical records and to help physicians better understand patient information by structuring it.
2. **Robotic surgery**: Robotic surgeons have a limited margin of error and can operate 24 hours a day, seven days a week without being exhausted. Since they operate with such precision, they are less invasive than traditional treatments, potentially reducing the amount of time patients spend in the hospital recovering.
3. **Vital stats monitoring**: the different levels of a person's vital statistics decide their state of health, which is a continuous process. This data is no longer on tap, waiting to be analysed and converted into actionable insights as devices become more commonplace. Since vital signs have the potential to predict health symptoms even before the patient is conscious, there are many life-saving applications here.

E-COMMERCE:

1. **Better recommendations**: When people are asked about market AI implementations, this is usually the first example they provide, and it's because it's a setting where AI has already shown to be effective. The majority of major e-commerce firms have adopted Artificial Intelligence to make product recommendations that consumers may be interested in, resulting in substantial sales growth.
2. **Improving search results**: The ability of consumers to find what they're looking for is crucial to e-growth. It's all about business. Artificial Intelligence has been fine-tuning search results based on thousands of criteria to ensure that customers get exactly what they want.
3. **Chatbots**: This is a well-known example that reflects on AI chatbots' widespread use in a number of industries. Chatbots are now available to serve customers 24 hours a day, seven days a week, alleviating the shortage caused by a lack of human resources.

HUMAN RESOURCES:

1. **Hiring:** AI will sift through thousands of CVs in seconds using natural language processing to see if they're a good fit. This is beneficial because there would be no individual errors or biases, and the recruiting process would be much faster.

2. **Creating** a positive work environment: AI is being used to analyse employee data and place them in the appropriate units, assign tasks based on their competencies, collect feedback on the workplace, and predict whether or not they will leave.

WHAT IS BLOCK CHAIN?

Blockchain, also known as Distributed Ledger Technology (DLT), is a distributed ledger technology that uses decentralisation and cryptographic hashing to make any digital asset's history unalterable and transparent.

A Google Document is a good starting point for learning about blockchain technology. When we make a document and share it with a group of people, the document is circulated rather than copied or transferred. This results in a decentralised distribution chain in which everybody has access to the document at the same time.[6]

When waiting for changes from another party, no one is shut out, and all changes to the document are registered in real time, making them fully transparent. While blockchain is more complex, the basic concept remains the same.

HISTORY OF BLOCK CHAIN [7]

Despite the fact that blockchain is a relatively modern invention, it has a long and fascinating background. The timeline below summarises some of the most significant and well-known events in the history of blockchain.

"Bitcoin: A Peer-to-Peer Electronic Cash System" was published in 2008 by Satoshi Nakamoto, a pseudonym for an individual or organisation.

Until this point, the principle of block chain has only existed as a concept in the minds of various individuals.

HOW DOES BLOCKCHAIN WORK?[8]

Blocks, nodes, and miners are the three main terms of blockchain.

Block

Every chain is made up of several blocks, each of which has three basic elements:

[6] Built in, ,https://builtin.com/blockchain, [last visited May 16, 2021]

[7] Noor Muhammad Khan et al., *Blockchain Technology History: Ultimate Guide 101 Blockchains (2020)*, [May 176, 2021 5:13 P.M], https://101blockchains.com/history-of-blockchain-timeline/

[8] See supra note 7.

- The information contained in the block.
- A nonce is a 32-bit whole number. When a block is formed, a nonce is generated at random, which then generates a block header hash.
- The hash is a 256-bit number that is associated with the nonce. It has to begin with a large number of zeros (i.e., be extremely small).

A nonce generates the cryptographic hash when the first block of a chain is generated. Unless it is mined, the data in the block is considered signed and forever linked to the nonce and hash.

Miners

To add new blocks to the chain, miners use a technique known as mining.

Each block in a blockchain has its own unique nonce and hash, but it also refers to the previous block's hash, making block mining difficult, particularly on large chains. Miners solve the incredibly difficult math problem of generating an accepted hash with specialised algorithms.

Nodes

Decentralisation is one of the most relevant principles of blockchain technology. The chain cannot be owned by a single machine or person. Instead, the nodes of the chain join together to form a distributed ledger. A node is an electronic computer that holds a copy of the blockchain on hand and keeps the network running.

USES OF BLOCK CHAIN

The most well-known blockchain application is cryptocurrency. Bitcoin, Ethereum, and Litecoin are digital coins (or tokens) that can be used to buy goods and services. Crypto, which is a form of cryptographic currency, can be used to buy anything from lunch to a new house. Unlike traditional currencies, crypto relies on blockchain to function as both a shared ledger and a stronger cryptographic authentication mechanism, ensuring that all online transactions are recorded and secured.

Blockchain has long been associated with bitcoin, but the technology's ease of use and security have led to its adoption in a number of fields, the majority of which can be traced

back to the Ethereum blockchain's development. Programmers may use the Ethereum blockchain to create complex programmes that communicate with one another.[9]

In almost every field, blockchain appears to have an infinite number of applications. The ledger technology can be used to detect financial fraud, securely share patient health records between healthcare providers, and even track intellectual property and music rights in the corporate world.

ADVANTAGES AND DISADVANTAGES OF ARTIFICIAL INTELLIGENCE (AI)[10]

It's impossible to argue that technological advances have made our lives better. Anything from music reviews to map directions, mobile banking, and fraud prevention has been taken on by AI and other applications. The line between success and disaster is razor-thin. AI is no exception to the rule that there are always two sides to a coin. Taking a peek at some of the benefits of artificial intelligence:

1. **Human Error Reduction**: The term "human error" was coined to describe the fact that humans make errors from time to time. Computers, on the other hand, do not make these errors if they are correctly programmed. Artificial intelligence makes decisions based on previously collected data and a selection of algorithms.
2. **Take chances instead of humans**: This is one of artificial intelligence's most significant advantages. By building an AI Robot that can do the risky stuff for us, we can solve many of humanity's risky weaknesses. It can be used effectively in any kind of natural or man-made catastrophe, whether it is going to Mars, defusing a missile, exploring the deepest parts of the oceans, digging for coal and oil.
3. **Available 24x7**: An average person can work for 4–6 hours a day, excluding breaks. Humans are designed in such a way that they can take time off to refresh themselves and prepare for a new day at work, and they also have weekly off days to keep their work and personal lives apart. But, unlike humans, we can use AI to make machines work 24 hours a day, seven days a week with no breaks, and they don't get bored.

[9] Rahul Venugopal, *What is Blockchain: Blockchain Definition, Features and Use Case,* Simplilearn.com (2021), [May 16, 2021 5:45 P.M], https://www.simplilearn.com/tutorials/blockchain-tutorial/what-is-blockchain

[10] Sunil Kumar, *Advantages and Disadvantages of Artificial Intelligence Medium (2019),*Towards Data Science [May 16, 2021 6:30 P.M], https://towardsdatascience.com/advantages-and-disadvantages-of-artificial-intelligence-182a5ef6588c

4. **Helps with Routine Tasks**: We will be doing a lot of repetitive tasks in our day-to-day jobs, such as sending thank-you emails, double-checking documents for mistakes, and so on. We can use artificial intelligence to productively automate these mundane tasks and even eliminate “boring” tasks from humans' schedules, allowing them to be more innovative.

When you see the positive side of a situation, you should keep in mind that it still has a negative side. Similarly, while AI has some benefits, it still has several drawbacks that we must consider. So, let's take a look at some of the most significant drawbacks of artificial intelligence (AI) –

1. **Risk of unemployment**- As AI advances at an exponential rate, our intuitive brain wonders whether AI will finally be able to replace humans. To be frank, I'm not sure whether AI would raise or decrease unemployment. AI, on the other hand, is supposed to take over the majority of daily activities.
2. **Highly expensive implementation**- AI-based machines, computers, and other devices are extremely expensive to set up due to the complexity of engineering that goes into making them. The exorbitant expense does not stop there; repair and maintenance costs will run into the thousands of dollars.
3. **Lacks creativity**- Artificial intelligence (AI) isn't designed to create art. As a consequence, it should be obvious that AIs lack creativity and imagination. And even though they help you prepare and create something new, they will never be able to compete with the human brain. The person who programmes and orders them limits their capacity to be creative.
4. **Doesn't progress over time**- One of the most impressive aspects of human cognition is the ability of human brain power to increase with age and experience. The same cannot be said of AIs, which are machines that do not age and gradually deteriorate over time.

ADVANTAGES AND DISADVANTAGES OF BLOCK CHAIN[11]

First let's take a look at the advantages of block chain

1. **Improved processing speed-**

   Traditional banking organisations took a long time to process and execute transactions before the blockchain, but transaction speed increased significantly after the blockchain was introduced. The entire banking process used to take three days, but with the introduction of Blockchain, the time has been reduced to minutes, if not seconds.

2. **Safety and security-**

   Blockchain technology is extremely secure since each person who enters the network is given a unique identity that is linked to his account. This ensures that the transactions are made by the account owner. The chain's block encryption makes it more difficult for a hacker to break the chain's traditional setup.

3. **Traceability-**

   The Blockchain format is structured in such a way that any problem can be easily detected and, if necessary, resolved. It also leaves an audit trail that is permanent.

4. **Process Integrity-**

   This programme was designed in such a way that any block or transaction that relates to the chain cannot be changed for security purposes, resulting in an extremely high degree of security.

Now let's take a look the Disadvantages of block chain –

1. **Uncertainty in terms of regulatory status**

   The central government has developed and controls new money in every part of the world. Bitcoin's acceptance by banks and other financial institutions becomes a stumbling block.

2. **Power Consumption-**

   The Blockchain uses a lot of electricity; in one year, Bitcoin miners used more energy than 159 different countries combined. One explanation for this is that whenever a new node is formed, it interacts with every other node at the same time.

3. **Cost**

[11] Data Flair ,https://data-flair.training/blogs/advantages-and-disadvantages-of-blockchain/ [last visited May 17, 2021]

According to study, the overall cost of a Bitcoin exchange is $75-$160, with energy accounting for the majority of this cost. There is little reason to believe that technical advances would be able to resolve this issue. The storage conundrum, on the other hand, could be shielded by the intractable energy problems.

A JOINT APPROACH TO AI AND BLOCKCHAIN [12]

The block chain and AI both have drawbacks. What if we combine these 2 technologies and make them both work in getting each other better? So, AI can help us implement blockchain technology. Let's take a look on how AI can make blockchain technology efficient in different aspect -

1. **Long-term viability**

   Artificial intelligence methodologies have long been used to improve large-scale activities. A blockchain architecture and a microeconomic system, in theory, have a lot in common: separate integrated subsystems, autonomous computations, and so on. Microeconomics is concerned with allocating scarce resources among different uses in order to maximise consumers' utility and producers' benefit. Then, from the perspective of large-scale complex systems, a unified view of AI-backed blockchain system energy consumption optimization can be developed.[13]

2. **Talent Shortage**

   Given the existing scarcity of blockchain experts, one option is to use a multi-agent method. The process of writing/reading transaction data from blocks can thus be completely automated by building numerous task-oriented virtual agents. On the other hand, AI-assisted online learning will aid in the development of critical blockchain talent.

[12] Ahmed Banafa, *Blockchain and AI: A Perfect Match*? OpenMind BBVA (2021), [May 17, 2021 7:20 P.M], https://www.bbvaopenmind.com/en/technology/artificial-intelligence/blockchain-and-ai-a-perfect-match/

[13]Philipp Sandner, Jonas Gross & Robert Richter, *CONVERGENCE OF BLOCKCHAIN, IOT, AND AI FRONTIERS (2020)*,Frontierin, [May 17, 2021 8 P.M], https://www.frontiersin.org/articles/10.3389/fbloc.2020.522600/full

3. **Scalability**

In the sense of blockchain, scalability refers to a system's ability to scale as the number of users grows. In reality, scalability problems can be seen from a variety of perspectives, including latency (the time it takes to confirm a transaction), bootstrap time (the time it takes to validate a transaction), and cost caused per verified transaction. Overall, one or more of these scalability problems hinder the performance of a blockchain framework. Traditional centralised data mining strategies are struggling to deal with this situation since each block contains a certain volume of transaction data. New AI algorithms, on the other hand, will learn from distributed data sources, providing us with a global optimal solution for the goal blockchain structure.

4. **Security**

A blockchain system's protection issues include application layer vulnerabilities, data encryption mechanisms, and so on. The intrusion detection system (IDS) and intrusion security system (IPS) are essential components for detecting multiple attacks at the vulnerability applications layer. Swarm intelligence methods have been extensively used in this field to improve the effectiveness of an IDS. Computational intelligence (another main branch of AI) plays an important role in both classical and contemporary cryptographic schemes, including the blockchain data encryption mechanism. Their uses in this respect include encryption and hash functions (artificial neural network). In general, the benefits of using computational intelligence include the development of more stable cyphers and the improvement of the blockchain system's stability by enhanced system attack-defence processes.

5. **Hardware**

Specialized device modules are critical to the operation of a blockchain system. Modern computer architecture is based on the von Neumann architecture, which divides a computer into various components such as a central processing unit, internal memory, external storage, input/output (I/O) units, and buses (wires used to connect these components together). In this regard, neutrally motivated neuromorphic hardware illuminated a new path. Hardware architecture based on leaky integrate-and-fire and spike-timing-dependent plasticity spiking neuron models could include several hundred neurons as well as various synaptic step shift memory cells.

6. **Data Gatekeeper**

   With the growth of the data ecosystem, intelligent open data has become a top priority. When blockchain-based data services become more widely accessible, both businesses and individuals may need assistance with data accessibility, use, and interpretation. AI's capabilities make it ideal for these types of activities.

7. **Privacy**

   As more sensitive data is incorporated in blockchain systems, data protection becomes a major concern for ensuring users' privacy. This is somewhat relevant to a previous security problem in which we demonstrated the critical position of AI. Consider the Bitcoin blockchain scheme, which now uses elliptic curves to generate private and public keys. However, so far no one has succeeded in developing a public-key algorithm that is without flaws. Different intelligent search algorithms can be used together to search the bits of a hidden key to help solve this issue.

LATEST DEVELOPMENT AND TECHNOLOGICAL APPLICATION OF AI AND BLOCKCHAIN COMBINED-

Block chain and artificial intelligence were once all buzzwords, but that is no longer the case. Artificial intelligence (AI) and blockchain have evolved into industry-leading technologies that fuel innovation in almost every sector. Artificial intelligence (AI) refers to robots that are programmed to perform intelligent tasks that previously needed humans. Now let’s take a look at some practical applications of AI and block chain combination. From blockchain's ability to map and track food supply chains to AI's penetration into nearly every area of healthcare, each is addressing some of the world's most pressing issues.

They also work well together, designing and organising large databases, enforcing cyber security policies, and finishing tasks in a fraction of the time it takes humans.[14]

[14] Raghav Bharadwaj, *AI in Blockchain - Current Applications and Trends*, Emerj (2019), [May 18, 2021 8:30 P.M], https://emerj.com/ai-sector-overviews/ai-in-blockchain/

1. **Smart Computing Power-**

   Running a blockchain and all of its cryptographic data on a server would take a lot of processing power. For example, the hashing algorithms used to mine Bitcoin blocks employ a brute force approach, which involves manually enumerating all possible solution candidates and checking each one until it satisfies the problem's claim. With AI, we'll be able to take the next step and tackle projects in a more intelligent and efficient manner. Consider a machine learning-based algorithm that could digitally polish its skills in real time with the right training data.

2. **Creating Diverse Data Sets -**

   Unlike AI-based projects, blockchain technology creates transparent, accessible networks that, in the case of public blockchain networks, can be used by anyone, anywhere in the world. Blockchain networks are being used to facilitate decentralization across a number of industries, despite the fact that blockchain technology is the ledger that underpins crypto currencies.

   For example, Singularity NET is focused on using blockchain technology to facilitate a wider distribution of data and algorithms, ensuring the development of artificial intelligence and the advent of decentralized A.I.

3. **Data Protection-**

   The development of AI is completely dependent on data input — our data. Details are how AI learns about the world and what is going on in it. In essence, data nourishes AI, and AI will be able to evolve over time as a result. Blockchain, on the other hand, is a distributed ledger technology that allows for the cryptographic storage of data. It allows for the development of fully encrypted databases that can only be accessed by parties that have been granted permission. We have a backup scheme for people's sensitive and highly important personal information when blockchains and AI are combined. Medical or financial information is much too personal to entrust to the algorithms of a single organisation. Storing this data on a blockchain, which can be accessed by an AI with authorization and after it has gone through the proper procedures, will provide us with a slew of advantages, including personalised feedback while safely storing our sensitive information.

HERE ARE A FEW EXAMPLES OF COMPANIES THAT ARE COMBINING BLOCKCHAIN AND AI WITH ASTONISHING RESULTS.[15]

1. **FINALZE**

   Finalze is a technology platform that integrates blockchain and machine learning to build civil infrastructure-related applications. The company's technologies in the construction industry simplify and speed up workflow, management, and verification processes, and its software also integrates with wearables to ensure compliance with safety regulations.

2. **BLACKBOX AI**

   Blackbox AI is an artificial intelligence company that develops tools for new inventions. The company's engineers create personalised information infrastructure that powers everything from machine learning to natural language processing to blockchain technology. Aside from developing blockchain technology, the company also offers advisory services focused on how its technologies can help a blockchain reach its full potential.

3. **CORE SCIENTIFIC**

   Core Scientific integrates customised blockchain and artificial intelligence infrastructure into existing enterprise networks, allowing businesses to handle anything from supply chain management to real-time data reporting. The Core Scientific campus is 273 acres in size, with two substations and a hydroelectric dam on-site.

4. **BEXT360**

   Bext360 uses AI and blockchain to increase supply chain efficiency and performance in the chocolate, wood, fish, and mineral sectors. The company's artificial intelligence

[15] Sam Daley, *Tastier coffee hurricane prediction and fighting the opioid crisis: 31 ways blockchain & AI make a powerful pair*, Built In, [May 18, 2021 9 P.M], https://builtin.com/artificial-intelligence/blockchain-ai-examples

analyses crops and predicts growth rates, while blockchain ensures that a commodity's supply chain can be monitored from seed to finished product.

5. **BURSTIQ**

   BurstIQ created a "Health Wallet" that combines artificial intelligence, blockchain, and big data to manage a patient's data holistically. The Burst IQ wallet gives healthcare professionals access to a patient's medical history and exercise plans. Healthcare professionals can then buy, sell, or exchange patient data for different clinical trials or to learn more about a specific disease.

6. **VIA**

   VIA combines blockchain and artificial intelligence to assist some of the world's largest energy companies in better understanding and using data. Its Trusted Analytics Chain (TAC) safeguards an energy company's data, gathers it privately from various locations and companies, and uses smart contracts to give businesses a better overall view of the market.

AI AND BLOCKCHAIN REGULATION IN INDIA

In India, artificial intelligence and block chain are becoming more of a priority of policy growth. It has an important competence to take account of the nation's regional effect, the emerging AI and blockchain industry and aggressive governmental initiatives on the AI block chain combination. While current policy mechanisms are designed to promote the accelerated development of the AI & Block Chain for Economic Growth and Social Good in India and many other jurisdictions, the overall trend remains: the drawbacks and risks of decisions based on data are still retrospectively considered to create and implement AI and block chain applications.

Currently, India lacks a regulatory mechanism that governs the use of AI and blockchain technology. However, the finance minister issued a circular in 2018 announcing - “The Government does not consider Cryptocurrencies “as Legal Tender or Coin” and will take all measures to eliminate the use of these Crypto Assets in Financing “Illegitimate Activities” or a Part of the Payment System the Government will explore the use of Blockchain technology proactively for assuring in Digital Economy.”

This declaration suggests that the government was never against blockchain technology, but rather against crypto and anti-blockchain technology abuse.

The government eventually recognised the rise of crypto-regulated countries in 2020 and agreed to revoke the 2018 circular, allowing Indian financial institutions to collaborate with cryptocurrency exchanges. Nirmala Sitharaman, the *Finance Minister* at the time, said: “From our side, we are very clear that we are not shutting all options. We will allow certain windows for people to do experiments on the blockchain, bitcoins or cryptocurrency."

It is clear that She recognises that blockchain is a vast field, and that the development of fintech is dependent on such experiments. She also said that India has a competitive edge.

CONCLUSION

Despite its many advantages, blockchain technology is still in its infancy. Blockchain is one of the most revolutionary technologies that has the potential to transform the entire economic system. The convergence of blockchain and artificial intelligence is largely uncharted territory right now. Despite the fact that the merging of the two technologies has received a lot of academic attention, there aren't many programmes devoted to this ground-breaking combination. In this article, we've discussed a variety of blockchain implementation problems. Based on our preliminary review, we have outlined possible solution avenues through the lens of AI. The author hopes that this paper will encourage other researchers from various backgrounds to fully exploit AI's promise in the blockchain domain.