Patent Search

Invention Title	MACHINE LEARNING INTEGRATED BLOCKCHAIN MODEL FOR INDUSTRY 4.0 SMART APPLICATIONS
Publication Number	50/2023
Publication Date	15/12/2023
Publication Type	INA
Application Number	202341074960
Application Filing Date	03/11/2023
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	COMMUNICATION
Classification (IPC)	H04L0009320000, G06N0020000000, G06F0021620000, G06Q0010060000, H04L0009060000
Inventor	

Name	Address	Country	I
Dr. Beena B.M	Associate Professor, Computer Science and Engineering, Amrita School of Computing, Amrita Vishwa Vidyapeetham, Junnasandra, Bengaluru - 560035, Karnataka, India	India	I
Mr. Ranjan Kumar Dash	Professor, School of CS, Odisha University of Technology and Research, Bhubaneswar - 751029, Odisha, India	India	I
Dr. Anil Bhat	Senior Assistant Professor, Division of Agricultural Economics and Agribusiness Management, Faculty of Agriculture, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, Chatha -180009, Jammu and Kashmir, India	India	I
Dr. Deepak Jain	Assistant Professoer-Grade-3, 24, Saraswati Lane, Near Modern Dewan Beverages, Talab Tillo, Jammu Tawi, Jammu and Kashmir - 180002, India	India	I
Dr. Soudamini Behera	Assistant Professor, Electrical Engineering Department, Government College of Engineering, Kalahandi, At- Bandopala - 766003, Kalahandi, India	India	I
Mr. Aditya Kumar Prajapati	570/136-s, Fauji colony, Azad Nagar, Alambagh, Lucknow - 226005, Uttar Pradesh, India	India	I
Mr. Mohd Sartaj	Research Scholar, Department of Electrical Engineering, Aligarh Muslim University, Aligarh - 202001, Uttar Pradesh, India	India	I
Dr. Subhra Debdas	Associate Professor, KIIT Deemed to be University, Campus 3, School of Electrical Engineering, Patia, Bhubaneswar, Khordha - 751024, India	India	I
Mr. Sthitprajna Mishra	Research Scholar KIIT Deemed to be University, Campus 3, School of Electrical Engineering, Patia, Bhubaneswar, Khordha - 751024, India	India	I
Dr. Suraj Sharma	Associate Professor, Department of Computer Science and Engineering, Guru Ghasidas Vishwavidyalaya Bilaspur, Koni Bilaspur Chhattisgarh 495009, India	India	I

Applicant

Name	Address	Country	I
Dr. Beena B.M	Associate Professor, Computer Science and Engineering, Amrita School of Computing, Amrita Vishwa Vidyapeetham, Junnasandra, Bengaluru - 560035, Karnataka, India	India	I
Mr. Ranjan Kumar Dash	Professor, School of CS, Odisha University of Technology and Research, Bhubaneswar - 751029, Odisha, India	India	I
Dr. Anil Bhat	Senior Assistant Professor, Division of Agricultural Economics and Agribusiness Management, Faculty of Agriculture, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, Chatha -180009, Jammu and Kashmir, India	India	I
Dr. Deepak Jain	Assistant Professoer-Grade-3, 24, Saraswati Lane, Near Modern Dewan Beverages, Talab Tillo, Jammu Tawi, Jammu and Kashmir - 180002, India	India	I
Dr. Soudamini Behera	Assistant Professor, Electrical Engineering Department, Government College of Engineering, Kalahandi, At- Bandopala - 766003, Kalahandi, India	India	I
Mr. Aditya Kumar Prajapati	570/136-s, Fauji colony, Azad Nagar, Alambagh, Lucknow - 226005, Uttar Pradesh, India	India	I
Mr. Mohd Sartaj	Research Scholar, Department of Electrical Engineering, Aligarh Muslim University, Aligarh - 202001, Uttar Pradesh, India	India	I
Dr. Subhra Debdas	Associate Professor, KIIT Deemed to be University, Campus 3, School of Electrical Engineering, Patia, Bhubaneswar, Khordha - 751024, India	India	I
Mr. Sthitprajna Mishra	Research Scholar KIIT Deemed to be University, Campus 3, School of Electrical Engineering, Patia, Bhubaneswar, Khordha - 751024, India	India	I
Dr. Suraj Sharma	Associate Professor, Department of Computer Science and Engineering, Guru Ghasidas Vishwavidyalaya Bilaspur, Koni Bilaspur Chhattisgarh 495009, India	India	I

Abstract:

In the last few years, machine learning (ML) and blockchain are the most prominent innovations. Blockchain's potential has been widely explored in literature and medi especially in finance and payment industries. Data confidentiality and privacy are prioritized in blockchain's decentralized database. However, this procedure is time co and inconvenient, which is one of the explanations why blockchain technology has yet to gain widespread acceptance. To solve the invalid dataset, we used integrated and ML approaches to secure system transactions and manage a dataset. Mostly, blockchain can greatly facilitate the exchange of training data and ML models, as well decentralized information, stability, anonymity, and trustworthy ML decision making. This paper discusses the major potential of Blockchain in Industry 4.0. Various dri enablers, and associated capabilities of Blockchain technology for Industry 4.0 are discussed for insights. Different Industry 4.0 spheres/sub-domains for Blockchain te realization are also discussed. Finally, we have identified and studied fourteen significant applications of Blockchain in Industry 4.0. It is a range of new developments a for immense opportunities that are changing Industry 4.0. This technology would work to achieve amplified outcomes and work individually to enhance the process.

Complete Specification

Description:FIELD OF INVENTION

A blockchain, decentralized public ledger, stores transaction data in a series of blocks which are linked together. Data has been an important source of knowledge in r decades, bringing new possibilities to real-world challenges such as wireless networking, bioinformatics, agriculture, and finance through smart applications. Gatherir much data as possible from various sectors of the industry is one of the pillars of Industry 4.0. This produces a massive amount of data, and storing this constantly ch data in databases is a challenge, as is its connectivity, which poses security issues.

BACKGROUND OF INVENTION

In the current scenario, it is necessary to understand blockchain and its value for the effective implementation of Industry 4.0. Some fields have prospective advantag blockchain, like financial transactions applications in which blockchains can provide trust. Foreign currencies and fiat currency problems are excluded, and a controlle supply transaction may take place. The product itself and its assembly's identification part can also be linked to other areas of Blockchain in Industry 4.0. It provides a reminder where the ability to recognise goods with the defect may be beneficial. Here, blockchain will protect all the details about a product: its sub-assemblies, parts paths, etc. It reduces the expense and interruption of retrieval at any time in the supply chain. New data have been gathered by cameras and sensors that could be us construct the Blockchains network. It gives us access to more knowledge than a person would gather in a short period. In order to maintain end-user support, there r also be a corresponding structural transition within an organisation. Blockchain is one of the most influential technical breakthroughs in various fields. This technolog developed remarkably in recent years and provides many applications in manufacturing. It is used closely along with terms such as intelligent factories and Industry 4 Blockchain refers to a decentralised, encrypted, distributed ledger for filing computers that allow tamper-proof, real-time logs to be created

View Application Status