

# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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COMMITTED TO RESEARCH, INNOVATION AND EDUCATION

# 46

years

## DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Details of patents Filed / Published / Granted and income generated:

**2025-2026**

Sr. No	Title of the Patent	Patent no	Name of the Inventors	Status (Filed/Published/Granted)	Journal Number	Publication Date
1.	AI-POWERED AQUACULTURE ARCHITECT: OPTIMIZING FISH FARM DESIGN AND OPERATION WITH DEEP LEARNING AND MULTI-AGENT REINFORCEMENT LEARNING	202441005951A	Dr. R. Madana Mohana Dr. Kadiyala Ramana Dr. Shobarani Salvadi Dr. Satya Kiranmai Tadepalli Dr. Sheena Mohammed Mrs. Kaneez Fatima	Published	31/2025	01-08-2025

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Hyderabad-500075, Telangana, India.

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441005951 A

(19) INDIA

(22) Date of filing of Application :30/01/2024

(43) Publication Date : 01/08/2025

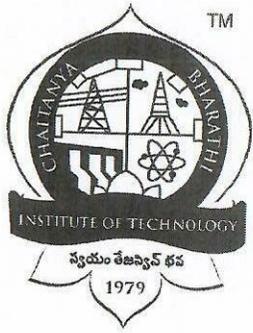
(54) Title of the invention : AI-POWERED AQUACULTURE ARCHITECT: OPTIMIZING FISH FARM DESIGN AND OPERATION WITH DEEP LEARNING AND MULTI-AGENT REINFORCEMENT LEARNING

(51) International classification	:G06N0003080000, G06N0003040000, G06N0020000000, A01K0063040000, G06K0009620000	(71)Name of Applicant : <b>1)Chaitanya Bharathi Institute of Technology,</b> Address of Applicant :Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, Telangana, India. PIN: 500075. Telangana India <b>2)DR. R. MADANA MOHANA</b> <b>3)DR. KADIYALA RAMANA</b> <b>4)MRS. SHOBARANI SALVADI</b> <b>5)MRS. SATYA KIRANMAI TADEPALLI</b> <b>6)MRS. SHEENA MOHAMMED</b> <b>7)MRS. KANEEZ FATIMA</b>
(31) Priority Document No	:NA	(72)Name of Inventor :
(32) Priority Date	:NA	<b>1)DR. R. MADANA MOHANA</b>
(33) Name of priority country	:NA	<b>2)DR. KADIYALA RAMANA</b>
(86) International Application No	:NA	<b>3)MRS. SHOBARANI SALVADI</b>
Filing Date	:NA	<b>4)MRS. SATYA KIRANMAI TADEPALLI</b>
(87) International Publication No	: NA	<b>5)MRS. SHEENA MOHAMMED</b>
(61) Patent of Addition to Application Number	:NA	<b>6)MRS. KANEEZ FATIMA</b>
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

ABSTRACT Our Invention “AI-Powered Aquaculture Architect: Optimizing Fish Farm Design and Operation with Deep Learning and Multi-agent Reinforcement Learning” is a Some of the main problems with traditional fish farming include water pollution, temperature imbalances, feed, space constraints, and expense. The aquaculture industry still has to overcome challenges including creating better monitoring systems, identifying outbreaks early, addressing high mortality, and advancing sustainability—all of which are unresolved issues that require attention. The objective of this research is to develop an aquaculture solution based on machine learning (ML) that increases prawn growth and productivity in ponds. The research presented a suggested architecture that uses sensors to gather data, a machine learning framework to analyze it, and a recommended list of water quality (QOW) factors that impact .Prawn growth and output, and the classification of ponds into those that produce low, medium, and high amounts of prawns. In this study, we employ three feature selection approaches to determine the factors that have the biggest influence on the overall harvest performance of the pond, in addition to eight different machine-learning classifiers to identify the driving factors that affect the development and yield of aquatic food products in ponds in terms of QOW variables.

No. of Pages : 11 No. of Claims : 5



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years

## DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

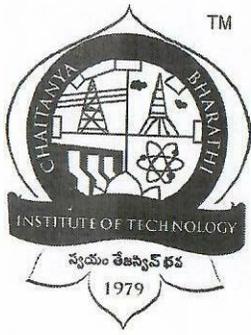
### Details of patents Filed / Published / Granted and income generated:

### 2024-2025

Sr. No	Title of the Patent	Patent no	Name of the Inventors	Status (Filed/Published /Granted)	Journal Number	Publication Date
1.	Blockchain-Enabled Security Architecture for IOT and Cloud Applications	202441097868	Nukala Sujata Gupta Dr. Sangeeta Gupta Dr. Gudeme Jaya Rao Dr. M. Subramaniam Ch Srilakshmi G. Mamatha Kavita Agrawal Manish Kumar <b>Dr. Shobarani Salvadi</b> Dr. N Rama Devi	Published	51/2024	20-12-2024
2.	Artificial Intelligence-based Intrusion Detection in IOT and Cloud Networks	202441103121A	Nukala Sujata Gupta Dr. Y. Ramadevi Dr. N. Rama Devi Dr. Sangeeta Gupta G. Mamatha Dr. Gudeme Jaya Rao Kavita Agarwal <b>Dr. Satya Kiranmai Tadepalli</b> <b>Batta Saranya</b> G. Shanmukhi Rama	Published	02/2025	10-01-2025

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21/12/24



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# 46

years

## DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Sr. No	Title of the Patent	Patent no	Name of the Inventors	Status (Filed/Published /Granted)	Journal Number	Publication Date
3.	Deep Learning: A Critical Problem for Fault Diagnosis using Transfer Learning with Dynamic Multiscale Representation	202541024418	Dr. Shobarani Salvadi Dr. Satya Kiranmai Tadepalli Dr. K. Radhika Dr. K. Ramana Dr. Srinivasa Rao Madala Dr. P. Srilatha Dr. K. Rama Krishna Mr. S. M. Naveen Raja Ms. Vemula Vasuki Rohinidevi Ms. T. Madhuri	Published	13/2025	28-03-2025

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<p>(51) International classification :H04L0009400000, H04L0009000000, H04L0009320000, H04L0009060000, H04L0009080000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : <b>1)Chaitanya Bharathi Institute of Technology</b> Address of Applicant :Gandipet, Hyderabad, T.S, India, PIN: 500075, Hyderabad. -----</p> <p><b>Name of Applicant : NA</b> <b>Address of Applicant : NA</b></p> <p>(72)Name of Inventor : <b>1)Nukala Sujata Gupta</b> Address of Applicant :Assistant Professor, Department of Computer Engineering and Technology, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India – 500075. -----</p> <p><b>2)Dr. Sangeeta Gupta</b> Address of Applicant :Professor &amp; Head, Department of Computer Engineering and Technology, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India – 500075. -----</p> <p><b>3)Dr. Gudeme Jaya Rao</b> Address of Applicant :Assistant Professor, Department of Computer Engineering and Technology, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India – 500075. -----</p> <p><b>4)Dr. M. Subramaniam</b> Address of Applicant :Professor, Department of Computer Engineering and Technology, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India – 500075. -----</p> <p><b>5)Ch Srilakshmi</b> Address of Applicant :Assistant Professor, Department of Computer Engineering and Technology, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India – 500075. -----</p> <p><b>6)G. Mamatha</b> Address of Applicant :Assistant Professor, Department of Computer Engineering and Technology, Chaitanya Bharathi Institute of Technology, Gandipet Hyderabad, India – 500075. -----</p> <p><b>7)Kavita Agrawal</b> Address of Applicant :Assistant Professor, Department of Computer Engineering and Technology, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India – 500075. -----</p> <p><b>8)Manish Kumar</b> Address of Applicant :Assistant Professor, Department of Computer Engineering and Technology, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India – 500075. -----</p> <p><b>9)Dr. Shobarani Salvadi</b> Address of Applicant :Assistant Professor, Department of Artificial Intelligence and Data Science,Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India – 500075. ----</p> <p><b>10)Dr. N Rama Devi</b> Address of Applicant :Professor Department of Computer Engineering and Technology, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India – 500075. -----</p>
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(57) Abstract :  
The present invention relates to a blockchain-enabled security architecture designed to enhance the security, data integrity, and communication between Internet of Things (IoT) devices and cloud applications. The architecture utilizes a decentralized authentication mechanism, wherein device identities are verified using cryptographic key pairs stored on a blockchain, eliminating single points of failure. Access control is managed through smart contracts, which dynamically enforce security policies based on real-time analytics. The system integrates a lightweight consensus algorithm tailored for resource-constrained IoT devices, ensuring scalability and energy efficiency. Cryptographic hashing secures data transmission, while off-chain storage solutions handle large datasets, linking them to the blockchain through cryptographic pointers. Machine learning-based threat detection is employed to monitor and identify anomalies in device and network activity, recording detected threats as immutable audit trails on the blockchain. This system improves the security, scalability, and resilience of IoT-cloud ecosystems.

No. of Pages : 17 No. of Claims : 8

(54) Title of the invention : ARTIFICIAL INTELLIGENCE-BASED INTRUSION DETECTION IN IOT AND CLOUD NETWORKS

(51) International classification :H04L0009400000, G06F0021550000, G06F0021570000,  
G06N003088000, G06N0020000000

(86) International Application No :NA  
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA  
Filing Date :NA

(62) Divisional to Application Number :NA  
Filing Date :NA

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**8)Dr. Satya Kiranmai Tadepalli**  
Address of Applicant :Assistant Professor, Department of Artificial Intelligence and Data Science, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India- 500075 -----  
**9)Batta Saranya**  
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**10)G Shanmukhi Rama**  
Address of Applicant :Professor, Department of Computer Engineering and Technology, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India – 500075 -----

(57) Abstract :  
The present invention provides an artificial intelligence-based intrusion detection system designed for IoT and cloud networks to enhance cybersecurity. The system utilizes a hybrid AI detection engine that combines supervised and unsupervised learning techniques to identify both known attack patterns and emerging threats, such as zero-day vulnerabilities. It includes components for continuous network traffic monitoring, feature extraction, and real-time analysis, ensuring minimal resource consumption even in IoT environments with limited computational power. The automated response unit responds immediately to detected intrusions by executing countermeasures like isolating compromised devices and notifying network administrators. This scalable, adaptive system offers efficient, real-time security for dynamic and distributed network infrastructures, improving the resilience of IoT and cloud-based applications against cyber threats.

No. of Pages : 17 No. of Claims : 9

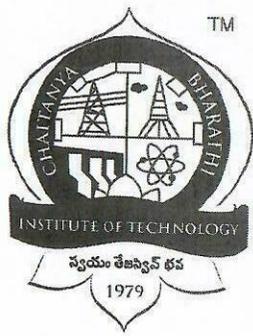
(54) Title of the invention : DEEP LEARNING: A CRITICAL PROBLEM FOR FAULT DIAGNOSIS USING TRANSFER LEARNING WITH DYNAMIC MULTISCALE REPRESENTATION

<p>(51) International classification :G06N0020000000, G06N0003080000, G06N0003045000, G06F0008600000, G05B0023020000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p><b>(71)Name of Applicant :</b>  <b>1)Chaitanya Bharathi Institute of Technology</b>  Address of Applicant :Gandipet, Hyderabad, T.S, India, PIN: 500075, Hyderabad, Telangana -----  <b>Name of Applicant : NA</b>  <b>Address of Applicant : NA</b>  <b>(72)Name of Inventor :</b>  <b>1)Dr. Shobarani Salvadi</b>  Address of Applicant :Assistant Professor, Department of Artificial Intelligence and Data Science, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India, Telangana-500075 -----  <b>2)Dr. Satya Kiranmai Tadepalli</b>  Address of Applicant :Asistant Professor, Department of Artificial Intelligence and Data Science, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India, Telangana-500075 -----  <b>3)Dr. K. Radhika</b>  Address of Applicant :Professor, Department of Artificial Intelligence and Data Science, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India, Telangana-500075 -----  <b>4)Dr. K. Ramana</b>  Address of Applicant :Associate Professor, Department of Artificial Intelligence and Data Science, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India, Telangana-500075 -----  <b>5)Dr. Srinivasa Rao Madala</b>  Address of Applicant :Associate Professor, Department of Artificial Intelligence and Data Science, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India, Telangana-500075 -----  <b>6)Dr. P. Srilatha</b>  Address of Applicant :Associate Professor, Department of Artificial Intelligence and Data Science, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India, Telangana-500075 -----  <b>7)Dr. K. Rama Krishna</b>  Address of Applicant :Professor, Department of Information Technology, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India, Telangana-500075 -----  <b>8)Mr. S. M. Naveen Raja</b>  Address of Applicant :Assistant Professor, Department of Artificial Intelligence and Data Science, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India, Telangana-500075 -----  <b>9)Ms. Vemula Vasuki Rohinidevi</b>  Address of Applicant :Assistant Professor, Department of Artificial Intelligence and Data Science, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India, Telangana-500075 -----  <b>10)Ms. T. Madhuri</b>  Address of Applicant :Assistant Professor, Department of Information Technology, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India, Telangana-500075 -----</p>
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(57) Abstract :

The present invention provides a deep learning-based fault diagnosis system utilizing transfer learning with dynamic multiscale representation to enhance fault detection accuracy across various domains, including industrial machinery, electric vehicles, and aerospace engines. The system leverages pre-trained deep learning models, fine-tuned for specific fault detection tasks, reducing the need for extensive labeled datasets. A dynamic multiscale representation module extracts fault-related features across multiple time-frequency scales, improving adaptability to complex fault patterns. The system integrates a self-learning optimization mechanism to continuously update model parameters, ensuring real-time adaptability and minimizing model drift. Deployable on cloud or edge computing infrastructure, the invention enables real-time fault detection, predictive maintenance, and explainable AI-based diagnostics, significantly improving operational efficiency and reducing downtime.

No. of Pages : 18 No. of Claims : 7



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**46**  
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## DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Details of patents Filed / Published / Granted and income generated:

**2023-2024**

Sr. No	Title of the Patent	Patent no	Name of the Inventors	Status (Filed/Published /Granted)	Journal Number	Publication Date
1.	Machine Learning Classifier on Chronic Kidney Disease	202441007148	K. Jayanthi Dr Potu Narayana <b>Ravikumar Ch</b> K Raghavendar Dr. Garalapati Narayana K. Radha Ch. Divya, Bandla Ramesh	Published	10/2024	08-03-2024
2.	An Intelligent Predictive Maintenance System for Clutch Assemblies using Edge AI and Pressure Sensor Data	202441013558	Dr. Md. Aleem Pasha Nagadevi D T. N. Aditya <b>Ravikumar Ch</b> Medikonda Asha Kiran Garlapati Narayana	Published	12/2024	22-03-2024
3.	Blockchain-based confidentiality Framework for Secure Data Sharing in Financial Transactions	202441018455	Dr. R. Sridevi Dr. Sk. Khaja Shareef <b>Dr. Sheena Mohammed</b> Vemula Harish Dr K. S. Sadasiva Rao	Published	13/2024	29-03-2024
4.	Deep Learning Framework for Detection of Accidents in low Quality CCTV Surveillance Videos in Tunnels	202441027934	Dr. Swathi Sowmya Bavirathi <b>Dr. K. Radhika</b> Ms. K Swathi Dr. Suganya Katta <b>Dr. Pulipati Srilatha</b>	Published	15/2024	12-04-2024

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14/2/26

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441007148 A

(19) INDIA

(22) Date of filing of Application :02/02/2024

(43) Publication Date : 08/03/2024

(54) Title of the invention : MACHINE LEARNING CLASSIFIER ON CHRONIC KIDNEY DISEASE

<p>(51) International classification :G06F18/213, G06F18/24, G06N20/00, G06N20/10, G06N3/02, G06N3/08, G16H50/30</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant :  <b>1)K. Jayanthi</b>  Address of Applicant :SRM Institute of Science and Technology, Tiruchirappalli, Tamilnadu, 621105 -----  <b>2)Dr Potu Narayana</b>  <b>3)Ravikumar Ch</b>  <b>4)K Raghavendar</b>  <b>5)Dr. Garalapati Narayana</b>  <b>6)K. Radha</b>  <b>7)Ch. Divya,</b>  <b>8)Bandla Ramesh</b>  Name of Applicant : NA  Address of Applicant : NA  (72)Name of Inventor :  <b>1)K. Jayanthi</b>  Address of Applicant :SRM Institute of Science and Technology, Tiruchirappalli, Tamilnadu, 621105 -----  <b>2)Dr Potu Narayana</b>  Address of Applicant :Stanley College of Engineering and Technology for Women Fateh Maidan, Abids, Hyderabad, Telangana, 500001 -----  <b>3)Ravikumar Ch</b>  Address of Applicant :Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, Telangana, 500075 -----  <b>4)K Raghavendar</b>  Address of Applicant :Teegalakrishna Reddy Engineering College, Meerpet, Saroornagar, Hyderabad, Telangana, 500097 -----  <b>5)Dr. Garalapati Narayana</b>  Address of Applicant :Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, Telangana, 500075 -----  <b>6)K. Radha</b>  Address of Applicant :St. Martin,s Engineering College, Dulapally, Kompally, Secunderabad, Telangana, 500014 -----  <b>7)Ch. Divya</b>  Address of Applicant :St. Martin,s Engineering College, Dulapally, Kompally, Secunderabad, Telangana, 500014 -----  <b>8)Bandla Ramesh</b>  Address of Applicant :St. Martin,s Engineering College, Dulapally, Kompally, Secunderabad, Telangana, 500014 -----</p>
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(57) Abstract :

Chronic Kidney Disease (CKD) is a type of chronic disease which means it happens slowly over a period of time and persists for a long time thereafter. It is deadly at its end stage and will only be cured by kidney replacement or regular dialysis which is an artificial filtering mechanism. It is important to identify CKD at the early stage so that necessary treatments can be provided to prevent or cure the disease. The main focus in this paper is on the classification techniques, that is, tree-based decision tree, random forest, and logistic regression has been analyzed. Different measure has been used for comparison between algorithms for the dataset collected from standard UCI repository.

No. of Pages : 10 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441013558 A

(19) INDIA

(22) Date of filing of Application :25/02/2024

(43) Publication Date : 22/03/2024

(54) Title of the invention : AN INTELLIGENT PREDICTIVE MAINTENANCESYSTEM FOR CLUTCH ASSEMBLIES USING EDGE AI AND PRESSURESENSOR DATA

(51) International classification :G06N002000000, G07C0005080000, F16D0043180000, G05B0023020000, G06Q0010000000

(86) International Application No :NA  
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA  
Filing Date :NA

(62) Divisional to Application Number :NA  
Filing Date :NA

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(57) Abstract :

The invention introduces an innovative solution in the field of automobile technology, notably targeting predictive maintenance systems for clutch assemblies. The breakthrough combines edge Artificial Intelligence (AI) with real-time pressure sensor data to proactively identify and forecast future problems in the clutch system of automobiles, acknowledging the constraints of conventional reactive maintenance procedures. [1015] The idea revolutionizes the approach to maintenance by transitioning from a reactive to a predictive model, allowing for the early identification of clutch-related issues prior to their detrimental effects on vehicle performance. A cutting-edge artificial intelligence processing unit is smoothly incorporated into the vehicle's systems, constantly monitoring and analyzing live data from strategically positioned pressure sensors within the clutch assembly. [1016] A cutting-edge artificial intelligence processing unit is smoothly incorporated into the vehicle's systems, constantly monitoring and analyzing live data from strategically positioned pressure sensors within the clutch assembly. The technology is specifically engineered to accommodate a wide range of clutch types, such as friction clutches, multiple plate clutches, cone clutches, and centrifugal clutches.

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441018455 A

(19) INDIA

(22) Date of filing of Application :14/03/2024

(43) Publication Date : 29/03/2024

(54) Title of the invention : BLOCKCHAIN-BASED CONFIDENTIALITY FRAMEWORK FOR SECURE DATA SHARING IN FINANCIAL TRANSACTIONS

(51) International classification :G06F16/176, G06F21/62, H04L9/06, H04L9/08, H04L9/32

(86) International Application No :NA  
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA  
Filing Date :NA

(62) Divisional to Application Number :NA  
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(57) Abstract :

**BLOCKCHAIN-BASED CONFIDENTIALITY FRAMEWORK FOR SECURE DATA SHARING IN FINANCIAL TRANSACTIONS ABSTRACT** The invention relates to a blockchain-based confidentiality framework (100) designed for secure data sharing within financial transactions. The framework incorporates a distributed ledger (108) deployed on a blockchain network, consisting of a multitude of nodes (110), each endowed with cryptographic capabilities. A specialized data sharing module (112) is integrated, tasked with receiving financial transaction data and generating a confidential transaction record. This confidential transaction record, comprising encrypted financial data and access control information, undergoes validation through a consensus mechanism (114). Executed by the plurality of nodes, this consensus mechanism ensures the integrity of the data and facilitates its secure appending to the distributed ledger. The invention provides a robust and secure solution for confidential financial data sharing, leveraging the decentralized and cryptographic features of blockchain technology. FIG. 1

No. of Pages : 25 No. of Claims : 9

(54) Title of the invention : DEEP LEARNING FRAMEWORK FOR DETECTION OF ACCIDENTS IN LOW QUALITY CCTV SURVEILLANCE VIDEOS IN TUNNELS

<p>(51) International classification :G06N0003080000, G06N0003040000, H04N0007180000, G06K0009620000, G06N0020100000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)<b>Name of Applicant :</b>  <b>1)CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY</b>  Address of Applicant :Gandipet, Hyderabad, Telangana-500075, India. Hyderabad -----</p> <p><b>Name of Applicant : NA</b>  <b>Address of Applicant : NA</b></p> <p>(72)<b>Name of Inventor :</b>  <b>1)Dr. Swathi Sowmya Bavirthi</b>  Address of Applicant :Assistant Professor, Department of Information Technology, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, Telangana. PIN: 500075. -----</p> <p><b>2)Dr. K. Radhika</b>  Address of Applicant :Professor, Department of AI&amp;DS, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, Telangana, PIN : 500075. -----</p> <p><b>3)Ms.K Swathi</b>  Address of Applicant :Assistant Professor, Department of Information Technology,Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, Telangana, PIN : 500075. -----</p> <p><b>4)Dr. Suganya Katta</b>  Address of Applicant :Assistant Professor, Department of Information Technology, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, Telangana. PIN: 500075. -----</p> <p><b>5)Dr. Pulipati Srilatha</b>  Address of Applicant :Associate Professor, Department of AI&amp;DS, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, Telangana, PIN : 500075. -----</p>
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(57) Abstract :

Road accidents in highways cause death and disability to people. However, death probability due to road accidents can be minimized with integration of data analytics and notification of accidents to authorities concerned automatically. Particularly tunnels in highways are prone to accidents where surveillance is challenging due to low-quality video streaming from CCTV cameras. With the emergence of AI, this problem can be addressed when deep learning is appropriately used. This invention is meant for building a deep learning framework for detection of accidents in low quality CCTV surveillance videos in tunnels and notifying the same to authorities concerned. This invention is designed to have multiple deep learning models with appropriate learning for detection of accidents in tunnels. ResNet50, a pre-trained model, is enhanced and used for automatic extraction of spatial features from video content. A convolutional LSTM model is used for extraction of temporal features from video. These two kinds of features are used to train a deep neural network to detect accidents automatically. The invention is realized with co-ordinated and integrated effort among spatial feature extraction module, temporal feature extraction module and accident classification module. The current invention is beneficial to stakeholders such as governments, road transport authorities, road safety departments, national highway authorities, police, researchers and academia.

No. of Pages : 15 No. of Claims : 5