Journal of Science, Computing and Engineering Research (JSCER)
Volume-9, Issue-1, January 2026.
DOI: *https://doi.org/10.46379/jscer.2026.080702*

Social Transformation through Blockchain Solutions

Arumugaar, Alivin, Jaganathan

Assistant Professor, Nitte Meenakshi Institute of Technology Chennai

Abstract— Whenever we all are casting a boat how do we make sure that the person or the purpose you vote gets the boat do we have any proof ?From United States to India to many democratic countries people have insecurities after casting their vote.Over here Blockchain technology can be used.

Corresponding Author:

Jaganathan

Keywords: ***Dynamic latch,Algortihm***

Citation: Dinesh M, Karthik, "Advancing Societal Development and Enabling Social Transformation through Blockchain Solutions", Journal of Science, Computing and Engineering Research, Volume-9, Issue-1, January 2026.

I. INTRODUCTION

Blockchain is a distributive database which has records and these records are called block.Blockchain was invented in 1991 by some researchers to keep time span for digital documents so that nobody can change the information.In 2009 Satoshi Nakamoto invented a bitcoin which is a digital cyptocurrency.

Method:

A block consists of 3 parts data,unique hash value and previous block address and it's hash value changes whenever a new data is added or changed and easily to identify who hacked into the system.Blockchain are of two types:

- Public blockchain
- Private blockchain

Public blockchain: Public blockchain is open to all and can be accessed by anyone.Many companies or organizations don't keep public blockchain because anyone can misuse the information.

Private blockchain: It is the opposite of public blockchain and has a private key to access it.

The above image is the architecture of a blockchain.

Proof of work:

If John want to send 50 dollar to Steven so John will go to bank and send the money to his account and it will take 3 days and some transaction fees. Over here blockchain technology will ease their life as John will create a public block of 50 dollar and he has both public and private key which has a length of 256 bits, due to this john don't need to be any verification from bank because of proof of work which is also known as Distributed Trust less Consensus.

Potential uses of block chain technology:

- Banking
- Real Estate
- Legal contracts
- Online Voting
- Stock Traing
- Food Production
- Airlines
- Personal Identification

II. CONCLUSION

Blockchain technology is a decentralized concept where transactions or smart contracts are maintained in a public ledger which is copied all around the world in different nodes. On a single blockchain, every transaction ever made is available. Anybody can check them using blockchain software.It's scope is as wide as internet goes. For any kind of communication, data base, decentralized system will maintain the consistency as well as the verification process, removing the middle men needed for either things.

REFERENCES

[1]. P. Nirmala, T. Manimegalai, J. R. Arunkumar, S. Vimala, G. Vinoth Rajkumar, Raja Raju, "A Mechanism for Detecting the Intruder in the Network through a Stacking Dilated CNN Model", Wireless Communications and Mobile Computing, vol. 2022, Article ID 1955009, 13 pages, 2022. https://doi.org/10.1155/2022/1955009.

[2]. D. Sathyanarayanan, T. S. Reddy, A. Sathish, P. Geetha, J. R. Arunkumar and S. P. K. Deepak, "American Sign Language Recognition System for Numerical and Alphabets," 2023 International Conference on Research Methodologies in Knowledge Management, Artificial Intelligence and Telecommunication Engineering (RMKMATE), Chennai, India, 2023, pp. 1-6, doi: 10.1109/RMKMATE59243.2023.10369455.

[3]. J. R. Arunkumar, Tagele berihun Mengist, 2020" Developing Ethiopian Yirgacheffe Coffee Grading Model using a Deep Learning Classifier" International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-9 Issue-4, February 2020. DOI: 10.35940/ijitee.D1823.029420.

[4]. Ashwini, S., Arunkumar, J.R., Prabu, R.T. et al. Diagnosis and multi-classification of lung diseases in CXR images using optimized deep convolutional neural network. Soft Comput (2023). https://doi.org/10.1007/s00500-023-09480-3

[5]. J.R.Arunkumar, Dr.E.Muthukumar," A Novel Method to Improve AODV Protocol for WSN" in Journal of Engineering Sciences" ISSN NO: 0377-9254Volume 3, Issue 1, Jul 2012.

[6]. R. K, A. Shameem, P. Biswas, B. T. Geetha, J. R. Arunkumar and P. K. Lakineni, "Supply Chain Management Using Blockchain: Opportunities, Challenges, and Future Directions," 2023 Second International Conference on Informatics (ICI), Noida, India, 2023, pp. 1-6, doi: 10.1109/ICI60088.2023.10421633.

[7]. Arunkumar, J. R. "Study Analysis of Cloud Security Chanllenges and Issues in Cloud Computing Technologies." Journal of Science, Computing and Engineering Research 6.8 (2023): 06-10.

[8]. J. R. Arunkumar, R. Raman, S. Sivakumar and R. Pavithra, "Wearable Devices for Patient Monitoring System using IoT," 2023 8th International Conference on Communication and Electronics Systems (ICCES), Coimbatore, India, 2023, pp. 381-385, doi: 10.1109/ICCES57224.2023.10192741.

[9]. S. Sugumaran, C. Geetha, S. S, P. C. Bharath Kumar, T. D. Subha and J. R. Arunkumar, "Energy Efficient Routing Algorithm with Mobile Sink Assistance in Wireless Sensor Networks," 2023 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), Chennai, India, 2023, pp. 1-7, doi: 10.1109/ACCAI58221.2023.10201142.

[10]. R. S. Vignesh, V. Chinnammal, Gururaj.D, A. K. Kumar, K. V. Karthikeyan and J. R. Arunkumar, "Secured Data Access and Control Abilities Management over Cloud Environment using Novel Cryptographic Principles," 2023 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), Chennai, India, 2023, pp. 1-8, doi: 10.1109/ACCAI58221.2023.10199616.

[11]. Syamala, M., Anusuya, R., Sonkar, S.K. et al. Big data analytics for dynamic network slicing in 5G and beyond with dynamic user preferences. Opt Quant Electron 56, 61 (2024). https://doi.org/10.1007/s11082-023-05663-2

[12]. Krishna Veni, S. R., and R. Anusuya. "Design and Study Analysis Automated Recognition system of Fake Currency Notes." Journal of Science, Computing and Engineering Research 6.6 (2023): 16-20.

[13]. V. RamKumar, S. Shanthi, K. S. Kumar, S. Kanageswari, S. Mahalakshmi and R. Anusuya, "Internet of Things Assisted Remote Health and Safety Monitoring Scheme Using Intelligent Sensors," 2023 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), Chennai, India, 2023, pp. 1-8, doi: 10.1109/ACCAI58221.2023.10199766.

[14]. R. S. Vignesh, R. Sankar, A. Balaji, K. S. Kumar, V. Sharmila Bhargavi and R. Anusuya, "IoT Assisted Drunk and Drive People Identification to Avoid Accidents and Ensure Road Safety Measures," 2023 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), Chennai, India, 2023, pp. 1-7, doi: 10.1109/ACCAI58221.2023.10200809.

[15]. I. Chandra, G. Sowmiya, G. Charulatha, S. D, S. Gomathi and R. Anusuya, "An efficient Intelligent Systems for Low-Power Consumption Zigbee-Based Wearable Device for Voice Data Transmission," 2023 International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering (ICECONF), Chennai, India, 2023, pp. 1-7, doi: 10.1109/ICECONF57129.2023.10083856.

[16]. G. Karthikeyan, D. T. G, R. Anusuya, K. K. G, J. T and R. T. Prabu, "Real-Time Sidewalk Crack Identification and Classification based on Convolutional Neural Network using Thermal Images," 2022 International Conference on Automation, Computing and Renewable Systems (ICACRS), Pudukkottai, India, 2022, pp. 1266-1274, doi: 10.1109/ICACRS55517.2022.10029202.

[17]. R. Meena, T. Kavitha, A. K. S, D. M. Mathew, R. Anusuya and G. Karthik, "Extracting Behavioral Characteristics of College Students Using Data Mining on Big Data," 2023 International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering (ICECONF), Chennai, India, 2023, pp. 1-7, doi: 10.1109/ICECONF57129.2023.10084276.

[18]. S. Bharathi, A. Balaji, D. Irene. J, C. Kalaivanan and R. Anusuya, "An Efficient Liver Disease Prediction based on Deep Convolutional Neural Network using Biopsy Images," 2022 3rd International Conference on Smart Electronics and Communication (ICOSEC), Trichy, India, 2022, pp. 1141-1147, doi: 10.1109/ICOSEC54921.2022.9951870.

[19]. I. Chandra, G. Sowmiya, G. Charulatha, S. D, S. Gomathi and R. Anusuya, "An efficient Intelligent Systems for Low-Power Consumption Zigbee-Based Wearable Device for Voice Data Transmission," 2023 International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering (ICECONF), Chennai, India, 2023, pp. 1-7, doi: 10.1109/ICECONF57129.2023.10083856. I. Chandra, K. V. Karthikeyan, R. V, S. K, M. Tamilselvi and J. R. Arunkumar, "A Robust and Efficient Computational Offloading and Task

Scheduling Model in Mobile Cloud Computing," 2023 International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering (ICECONF), Chennai, India, 2023, pp. 1-8, doi: 10.1109/ICECONF57129.2023.10084293.

[20]. Revathi, S., et al. "Developing an Infant Monitoring System using IoT (INMOS)." International Scientific Journal of Contemporary Research in Engineering Science and Management 6.1 (2021): 111-115.

[21]. R. K, A. Shameem, P. Biswas, B. T. Geetha, J. R. Arunkumar and P. K. Lakineni, "Supply Chain Management Using Blockchain: Opportunities, Challenges, and Future Directions," 2023 Second International Conference on Informatics (ICI), Noida, India, 2023, pp. 1-6, doi: 10.1109/ICI60088.2023.10421633.

[22]. J.R.Arunkumar. "Comprehensice Analysis of Security Issues in Cloud Computing Technologies", Journal of Science,Computing and Engineering Research, 6(5), 06-10, June 2023.

[23]. S. Sugumaran, C. Geetha, S. S, P. C. Bharath Kumar, T. D. Subha and J. R. Arunkumar, "Energy Efficient Routing Algorithm with Mobile Sink Assistance in Wireless Sensor Networks," 2023 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), Chennai, India, 2023, pp. 1-7, doi: 10.1109/ACCAI58221.2023.10201142.

[24]. I. Chandra, K. V. Karthikeyan, R. V, S. K, M. Tamilselvi and J. R. Arunkumar, "A Robust and Efficient Computational Offloading and Task Scheduling Model in Mobile Cloud Computing," 2023 International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering (ICECONF), Chennai, India, 2023, pp. 1-8, doi: 10.1109/ICECONF57129.2023.10084293.

[25]. R. S. Vignesh, A. Kumar S, T. M. Amirthalakshmi, P. Delphy, J. R. Arunkumar and S. Kamatchi, "An Efficient and Intelligent Systems for Internet of Things Based Health Observance System for Covid 19 Patients," 2023 International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering (ICECONF), Chennai, India, 2023, pp. 1-8, doi: 10.1109/ICECONF57129.2023.10084066.

[26]. DC Jullie Josephine, J Sudhakar, T Helan Vidhya, R Anusuya, G Ramkumar,"An Improved Multi class Breast cancer classification and Abnormality Detection based on Modified Deep Learning Neural Network Principles", Deep Learning in Biomedical Signal and Medical Imaging, CRC Press, Taylor and Francis, 2024.

[27]. R. Anusuya, Pragya Vashishtha, "Real Automatic Number Plate Image Detection With Yolo Algorithms", Journal of Science, Computing and Engineering Research, 7(7), July 2024.

[28]. K. Shetty, S. Tyagi, A. Jha, D. N. M. K. Rao, J. R. Arunkumar and L. R, "Natural Language Processing in Strategic Planning Analysis," 2024 Second International Conference Computational and Characterization Techniques in Engineering & Sciences (IC3TES), Lucknow, India, 2024, pp. 1-5, doi: 10.1109/IC3TES62412.2024.10877514.

[29]. S. Sugumaran, C. Geetha, S. S, P. C. Bharath Kumar, T. D. Subha and J. R. Arunkumar, "Energy Efficient Routing Algorithm with Mobile Sink Assistance in Wireless Sensor Networks," 2023 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), Chennai, India, 2023, pp. 1-7, doi: 10.1109/ACCAI58221.2023.10201142.

[30]. R. S. Vignesh, A. Kumar S, T. M. Amirthalakshmi, P. Delphy, J. R. Arunkumar and S. Kamatchi, "An Efficient and Intelligent Systems for Internet of Things Based Health Observance System for Covid 19 Patients," 2023 International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering (ICECONF), Chennai, India, 2023, pp. 1-8, doi: 10.1109/ICECONF57129.2023.10084066.

[31]. Jullie Josephine DC, Sudhakar J, Helan Vidhya T, Anusuya R, Ramkumar G. 15 An Improved Multi. Deep Learning in Biomedical Signal and Medical Imaging. 2024 Sep 30:237.

[32]. Arunkumar, J.R., Anusuya, R., Chilukuri, P., Ramkumar Prabhu, M. (2024). Secure Data Transfer and Deletion Using Secure Encryption Algorithm in Cloud Computing. In: Singh, N., Bashir, A.K., Kadry, S., Hu, YC. (eds) Proceedings of the 1st International Conference on Intelligent Healthcare and Computational Neural Modelling . ICIHCNN 2022. Advanced Technologies and Societal Change. Springer, Singapore. https://doi.org/10.1007/978-981-99-2832-3_84

[33]. G. Manoharan, P. D. Sawant, J. Vanitha, M. Lourens, R. Anusuya and I. Bhati, "Cognitive Computing for HR Decision-Making," 2024 Second International Conference Computational and Characterization Techniques in Engineering & Sciences (IC3TES), Lucknow, India, 2024, pp. 1-5, doi: 10.1109/IC3TES62412.2024.10877480.

[34]. S. Sivakumar, R. Anusuya, V. Nagaraju, L. P. Narendruni and R. Thamizhamuthu, "QoS Based Efficient Link and Consistent Routing in Wireless Sensor Network," *2023 International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE)*, Bengaluru, India, 2023, pp. 1241-1246, doi: 10.1109/IITCEE57236.2023.10091080.