A SMART APPROACH TO ORPHANAGE DONATION MANAGEMENT

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ABSTRACT

The growing problem of orphans is a result of urbanization and industrialization. Each orphanage has different needs such as food, clothing, and medicine. While many people want to help, they may not know how to go about it. Our proposed solution is to create a central hub for connecting orphanages and old age homes in need of aid with individuals who are willing to help. Transparency and audit ability in all transactions helps build confidence with stakeholders and funders while also protecting against fraud and unwanted access. Also, the conditions of contribution agreements may be automated and enforced by "smart contracts" that is Block chain-based code executables. Like smart contracts may include features like as minimum price levels, automatic contribution verification, and predetermined procedures for money transfers. However, there are many privileged people in any society who are capable of satisfying their needs and some who don't. In such environments, there are people who are willing to aid (donors) and people who are longing to accept the help (donees). Both parties required a trustworthy platform to facilitate their needs. In this research, the main focus is to analyze the government schools in provincially. Surveys are conducted to analyze data and to aid to arrive at conclusions.

Keywords: *Orphanage, Stakeholders, automatic contribution, donors, "Smart contracts", Block chain, Analyze data.*

INTRODUCTION

Orphanage Management System is software which is helpful for managing and maintaining orphan's data which can be used by orphanages. In the current system all the activities are done manually. It's very time consuming and costly. Orphanage Management deals with the various activities related to the orphanage. In this project an admin can manage the orphan details and take decision about the record like deletion of any. This system provides a simple interface for the maintenance of orphan. Attaining this goal is challenging when using a manual system due to the scattered nature of information, the potential for redundancy, and the time-consuming process of collecting pertinent information. This information aligns with previous studies that painted a bleak picture of the effects of institutionalization on children's development. However, when delving deeper into the data, a different picture emerges. The development of this product surely urged several new areas of disquisition. This product has a wide compass of perpetration by creating it live. Likewise, this product creates several edges for the business and also the community. By taking it online, it will help numerous folks throughout the city by giving food daily. Hundreds of thousands of food units are moreover lost or wasted whereas a lot of individualities suffer from insufficiency complaints. As a consequence, analysis and conduct are units needed to boost the energy of the food donation gate. The study project

concludes by demonstrating the interdependence between technical development and ethical concerns. It is a public plea to assist those who are somewhat to blame for our situation while also paying tribute to the richness of generosity that defines our community. As a global community, we have the potential to create a future where technology supports personal growth, relationships flourish, and the strength of togetherness is symbolized by the grain of rice. Join us on this transformative journey as we begin to weave this story.

LITERATURE REVIEW

Anushka Пape (2023) Food waste is increasing at a rate that has never been witnessed before and this is negatively affecting the factors that propel economic growth. People squander large amounts of food every day. We need to use online applications to stop food waste. If a hotel or individual has food waste, they need to enter their address and the amount of food they have in the application. After that, the administrator will monitor the food donor orphanage information. The donor can sign up, check in, and make requests to the administrator at any time if they are squandering food. The administrator also maintains a record of the buyer's information (old age home, orphanage, etc.) following the donation request and message's examination by the administrator. The administrator collects food donations from contributors and distributes them to the closest nursing homes or orphanages through the use of a local agent. The administrator sends the donor an alert message as soon as the agent delivers the meal.

Manu Singh (2023) Charitable trust management system is designed mostly for orphanage home centers to achieve the orphan registration, adoption and maintenance. This platform can be used by Orphan Homes for useful interactions between your Adopters, Donors and Parents. Requirements can be updated and the Donors are notified about the new requirements. It provides an environment for adopters to find children. Charitable Trust Management System is the software used to store the adoption details, orphan details, donor details, donation details. To manage all these activities, we have developed this software. The charitable fund management system is built on the management side, so access is guaranteed only to managers. The goal of the paper is to establish connections between charitable trust and the donors/Adopter. It also maintains the records of the orphans in the Trust that allows online adoption of children and maintain the record of Adoption and keep track on the funds received and the expenditure of the trust.

Glen L. Gray (2020) the purpose of this study is to model the business process in order to find out whether auditing is really necessary when blockchain technologies are employed. A case study is first used to examine the pharmaceutical industry's medication supply chain. We take a look at the current and future blockchain initiatives in this industry, and we also discuss the supply chain problems that blockchain technology hasn't solved just yet. Using this method, we can prove that auditing is crucial for blockchains to address the "first mile problem" (FMP), which is making sure that the data in the distributed ledger matches the data it says it represents. The first mile problem arises when data pertaining to physical goods, especially those with a service component,

is kept on the blockchain, in contrast to native digital applications like bit coin. Up until it's practical to keep a "digital twin" of the item, auditors' professional scepticism could help alleviate the first mile challenge.

Pradip Kumar Sharma (2018) The "Internet of Things" and the rise of "Smart Cities" have opened up new possibilities for environmentally responsible city planning. Smart information and control systems, omnipresent sensing with millions of data sources, autonomous and decentralized systems, and a solid foundation are the building blocks of smart cities. With the proliferation of Internet of Things (IoT) devices and the ever-increasing data volumes, the current architecture of smart city networks is beset by problems with scalability, security, privacy, and bandwidth limitations. One possible solution to the problems with the present smart city network is to use a distributed architecture that is efficient, safe, and scalable to bring computation and storage closer to the endpoints. By integrating blockchain technology with software-defined networking (SDN), we provide a fresh perspective on smart city networking in this article.

Yun-Sung Lee (2018) Society is undergoing significant transformation as a result of the rapid growth of the Internet of Things (IoT) and blockchain technologies. Structured health monitoring (SHM) has not made sufficient use of technology or open communication amongst all stakeholders to enable autonomous decision-making. The ultimate goal of this study is to use blockchain and the Internet of Things to create a new distributed network that is ideal for SHM of underground buildings. Crucial is a

network that is safe, efficient, and can be expanded. We are committed to promoting operations that are safer. The division of labour between the central and edge networks gives these block chain-IoT system characteristics of both centralized and decentralized distribution. The efficiency and scalability of the system are enhanced by this split. The proposed method for autonomous building management and monitoring worked admirably in a controlled environment.

Orphanage

An orphanage is a residential institution, total institution or group home, devoted to the care of orphans and children who, for various reasons, cannot be cared for by their biological families. The parents may be deceased, absent, or abusive. There may be substance abuse or mental illness in the biological home, or the parent may simply be unwilling to care for the child. The legal responsibility for the support of abandoned children differs from country to country, and within countries. Government-run orphanages have been phased out in most developed countries during the latter half of the 20th century but continue to operate in many other regions internationally. It is now generally accepted that orphanages are detrimental to the emotional wellbeing of children, and government support goes instead towards supporting the family unit.

Comparison to alternatives

Orphanages, especially larger ones, have had some well publicized examples of poor care. In large institutions children, but particularly babies, may not receive enough eye contact, physical contact, and stimulation to promote proper physical, social or cognitive development. In the worst cases, orphanages can be dangerous

and unregulated places where children are subject to abuse and neglect.

One significant study, which disputes this, was carried out by Duke University. Their researchers concluded that institutional care in America in the 20th century produced the same health, emotional, intellectual, mental, and physical outcomes as care by relatives, and better than care in the homes of strangers. One explanation for this is the prevalence of permanent temporary foster care. This is the name for a long string of short stays with different foster care families. Permanent temporary foster care is highly disruptive to the child and prevents the child from developing a sense of security or belonging. Placement in the home of a relative maintains and usually improves the child's connection to family members.

Steele Home Orphanage

The Steele Home Orphanage was founded by Almira S. Steele after the passing of her late husband, Walter Steele. The orphanage was established to serve African American children of the South, it opened its doors in 1884. When the orphanage was first established it housed only three children; however, by 1925 the Steele Home had housed over sixteen hundred children. The home was located on Strait and Magnolia in Chattanooga, Tennessee. The Steele Home orphanage was the only orphanage in Chattanooga after Reconstruction that opened its doors to African American children. During the lifetime of Almira Steele, African American children were often excluded from orphanages and denied care, thus making the Steele Home a unique institution. The Steele Home was founded in order to provide equal opportunity care for children of African American ethnicity.

Backlash against the Orphanage

In November 1885, the orphanage experienced controversy from the city of Chattanooga when arsonists targeted the orphanage and burnt it to the ground. Almira reached out to the community around her and rallied support in order to build another, bigger orphanage for the African American children of the city of Chattanooga. Steele was able to raise $18,000 for the second Steele Orphanage which allowed her to accommodate even more children than before. After the completion of the new orphanage the African American Community continued to showcase its support by providing financial aid to Almira and her orphans. The workers of The Loomis and Hart Manufacturing Company donated a portion of their salaries in order to aid Mrs. Steele with the cost of upkeep for the orphanage.

Orphan Train

The Orphan Train Movement was a supervised welfare program that transported children from crowded Eastern cities of the United States to foster homes located largely in rural areas of the Midwest. The orphan trains operated between 1854 and 1929, relocating from about 200,000 children. The co-founders of the Orphan Train movement claimed that these children were orphaned, abandoned, abused, or homeless, but this was not always true. They were mostly the children of new immigrants and the children of the poor and destitute families living in these cities. Criticisms of the program include ineffective screening of caretakers, insufficient follow-ups on placements, and that many children were used as strictly slave farm labor.

RESEARCH METHODOLOGY

The project team should meet with the orphanage staff, doctors, and Guardian to gather the requirements for the orphanage management system. In this phase, the project team should design the architecture of the orphanage management system. The team should identify the different types of data that need to be stored in the blockchain, such as information about the orphans, doctors, and Guardian. Based on this, the team should create separate blockchains for each type of data, using IPFS and Hyperledger Fabric. Additionally, the team should design the public network for accepting donations using cryptocurrency. This involves implementing the various features and functionalities required by the system, such as the ability to store and update information about the orphans, doctors, and Guardian. The team should also implement the different roles and access levels for the system. Furthermore, the team should create a public network for accepting donations using cryptocurrency and connect it with the orphanage management system. This includes functional testing, performance testing, and security testing. The team should also test the donation system to ensure that it is working as expected. The team should also monitor the system to ensure that it is functioning properly and addressing the needs of the orphanage. Additionally, the team should provide support for the public network that accepts donations using cryptocurrency.

RESULTS AND DISCUSSIONS

The ratings were based on their own confidence that each company attempt may offer the capabilities indicated in the framework. After making sure they understood the concepts by looking closely at the examples, they sought out further information from other sources. For example, in order to grasp the breadth and depth of smart contracts, the BCT smart contracts group researched supply chain contracts. Similarly, in order to determine the impact of BCT on IoTs, the researchers searched academic literature that addressed issues with IoT installations in this specific setting. Coders from various disciplines checked the academic literature to make sure the analysis was accurate and the findings were reliable.
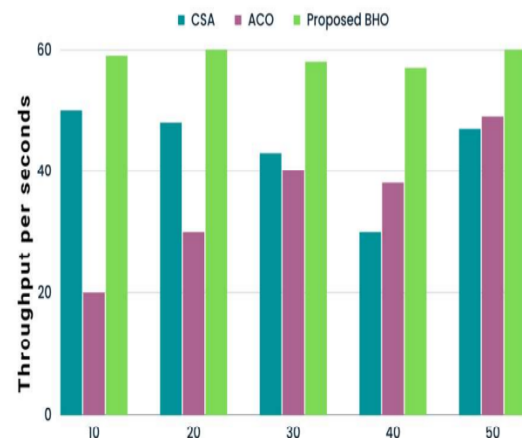

Graph 1: Performance analysis of throughput Vs number of epochs

An approach proposed in this article, Black Hole Optimisation (BHO), is contrasted with other well-known approaches. Two such methods are ACO and the Cuckoo Search. Fifty epochs were chosen for the throughput test. When compared to more traditional methods like ACO and CSA, the throughput rate achieved by optimising blockchain parameters is much greater. Previous approaches, such the CSA and the ACO algorithm, had a far lower convergence rate. Applying Shard technology to PBFT By using blockchain technology, we achieved our objective of enhancing throughput while reducing latency. An approach to improving speed,

responsiveness, and scalability is known as Black Hole Optimisation (BHO). An Intel core CPU, 16 GB of RAM, and a Windows 10 PC are used to run the simulations in MATLAB. Data from 1026 students is collected and stored via the decentralised Inter Planetary File System.
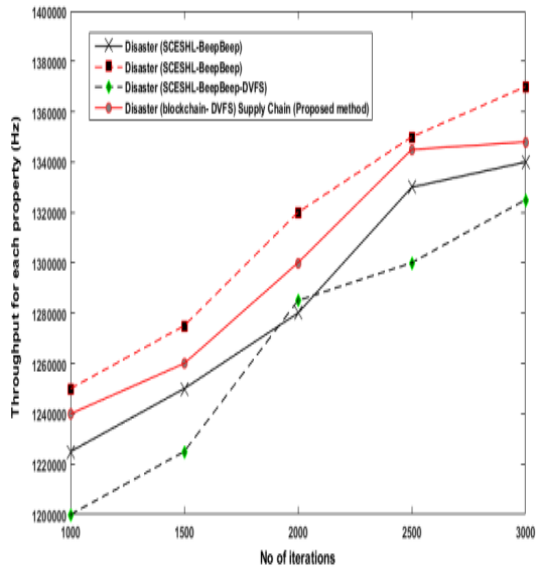

Graph 2: Throughput Diagram
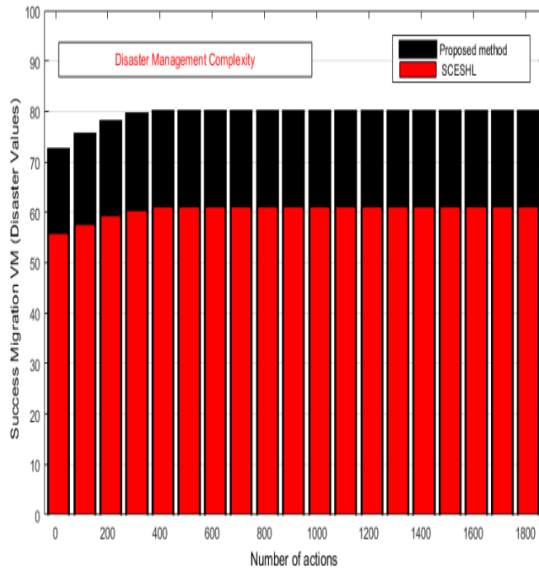
Graph 3: The Successful Migration Diagram

Supply chain and logistics have become more important to companies in the recent decade as they strive to remain competitive in modern sectors. A number of businesses have invested much in methods that boost productivity and satisfaction among clients. Modern corporate competition, contrary to common assumption, is characterised by competing supplier networks rather than individual firms. Businesses benefit from supply networks that reduce costs without sacrificing consumer value.
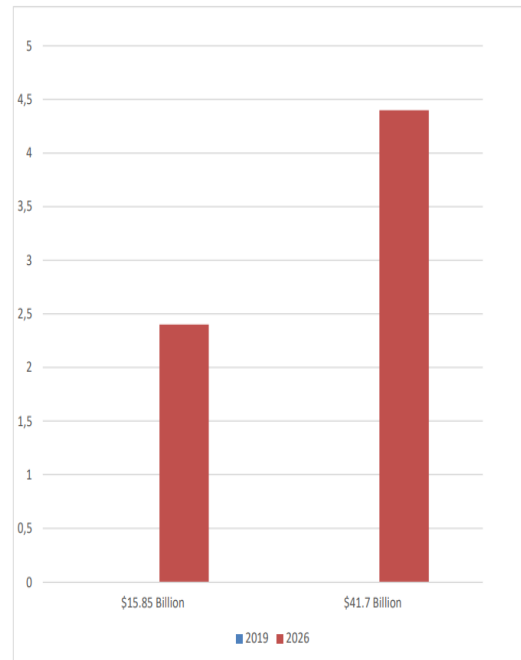
Graph 4: Food Supply Chain Global Value

This is where blockchain technology excels. Because of its decentralised, transparent, and secure architecture, it is well-suited for transporting perishable goods, such as fruits and vegetables that might be damaged by sudden changes in temperature. Findings indicate that supply chain operations will be significantly altered by blockchain technology. Every single process will be improved by using blockchain technology. There will be improvements to the accuracy and security of data in financial transactions, contracts, insurance, and audits.

CONCLUSION

Investigating the potential benefits and limitations of public and private blockchains and identifying ways to

optimize them for enhanced security, privacy, and efficiency. Most of these children have been deserted by their parents, with only a small fraction being orphans due to the death of their parents. The orphanages are struggling to provide for all of these children, hence the need for the general public to step up and make a difference. The use of Internet of Things (IoT) devices to automate donation management operations has the potential to significantly reduce operational expenses and human labour. Two ways smart inventory systems prevent waste are by improving storage conditions and efficiently lowering decaying losses. There has been a surge in interest in supporting rice donation initiatives, thanks to the immutability of blockchain technology. People may get a sense of self-worth and impact when they learn that their donations are going towards helping orphans. Internet of Things sensors can gather data in real-time, which allows for better allocation of resources and speedier distribution of donated rice. Orphanages might simplify their distribution processes with access to up-to-date data. Using blockchain's distributed ledger technology (DLT), future transactions involving donated rice and the rice itself may be verified. Orphanages may be better able to consistently and accurately report on matters of accountability and regulatory compliance.

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