

AIDL INK (CONNECT, DONATE, IMPACT)

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ABSTRACT

AidLink is a platform that connects donors with individuals needing essential items such as food, clothing, and sanitary products. The system provides an accessible way for donors to contribute during emergencies and crises, helping those in need while fostering community. AidLink aims to improve resource allocation during critical times by offering donors, administrators, and recipients a user-friendly platform.

Keywords: AidLink, Donation System, Community Support, Emergency Relief, User-Friendly Platform, Needy, Donors, NGO, Crisis Management

1. INTRODUCTION

The Indian charity sector has recently come under public scrutiny, leading to a trust deficit and reduced public goodwill. Undoubtedly, charitable giving is important in natural disasters and giving money. However, this concept of philanthropy fights with a lack of revenue transparency, which results in discontent among the givers. Restoring confidence in non-profit organizations is closely related to making it easier for donors to track their donations and increasing clarity of social assistance.[1] After disasters, communities lose access to essential resources like healthcare, food, and shelter. Timely and coordinated responses are crucial, but traditional donation systems often lack efficiency and transparency, leaving resources stranded and beneficiaries unsure about the effectiveness of aid.[6] AidLink is a centralized web platform that connects donors directly with individuals in need during disasters. By streamlining the donation process and eliminating intermediaries, it facilitates the efficient distribution of essential items like food and clothing.

2. LITERATURE SURVEY

Literature on platforms of donation highlights the different systems, such as GoFundMe, Give Directly, and food banks, which can be noted to address financial and in-kind aid, but often emphasize monetary donations or limited assistance types. Platforms like GoFundMe and crowdfunding systems have a focus on monetary contributions, whereas NGOs and food banks provide necessary goods, but suffer logistical bottlenecks. With AidLink, these platforms' strengths are outshone by setting up a user-friendly, real-time donation system right for those who need it: donors, particularly for emergencies, providing both monetary and in-kind support in a structured and scalable way. Malnutrition in a country's younger generation directly impacts literacy and economic status. A hungry community breeds unhealthiness and low education [2]. ShareTheMeal app, by the United Nations World Food Programme. ShareTheMeal enables users to "share" meals with those in need through micro-donations, which it turns into food assistance in hunger-affected countries. Although ShareTheMeal primarily facilitates cash contributions towards food, AidLink allows donors to donate real goods-ranging from clothes to sanitary products, equally critical at the time of a disaster.

1. Traditional Web-Based Donation Systems (Without Blockchain)

Traditional web-based donation management systems, such as GoFundMe, Just Giving, are widely used platforms where donors can contribute either in-kind donations or monetary support to various causes. These systems focus on ease of use, providing intuitive interfaces where users can create accounts, browse needs, and make donations.

Strengths:

- **User-Friendly Interfaces:** Traditional systems prioritize simplicity and accessibility, making it easy for donors to engage with the platform and make contributions. Platforms like GoFundMe and Just Giving have become popular because of their straightforward user experience, particularly for one-time donations and fundraisers.
- **Established Networks:** Many traditional platforms already have large user bases and are integrated into broader social media ecosystems, which help with promotion and visibility.
- **Centralized Control:** A single entity or organization typically oversees these platforms, ensuring a streamlined user experience while providing support for disputes or transaction issues.

Weaknesses:

- **Transparency and Trust Issues:** While these platforms may offer some level of donation tracking, they often lack real-time transparency into how funds are being used. Users must rely on platform administrators or third parties to provide accountability, which can lead to trust issues in some cases.
- **Security Vulnerabilities:** Centralized donation systems are more vulnerable to data breaches and hacking, as all sensitive user data and transactions are stored on centralized servers.
- **Processing Fees:** Traditional platforms often charge service fees or processing fees, which reduce the total amount of donations reaching the intended cause.

2. Web-Based Donation Systems with Blockchain Technology

Blockchain technology offers transformative potential in the realm of donation management systems, primarily due to its inherent capabilities for transparency, security, and decentralization. Unlike traditional centralized systems, blockchain allows for a distributed ledger where all donation transactions are recorded immutably, ensuring that donors and recipients can track the flow of funds and resources in real-time.

Strengths:

- **Enhanced Transparency:** Blockchain's decentralized ledger enables all transactions to be publicly visible and verifiable. This transparency helps mitigate issues of fraud or misallocation of funds, as every transaction can be traced from the donor to the recipient.
- **Improved Security:** The decentralized nature of blockchain, combined with cryptographic protocols, provides a high level of security for both donors and recipients. Since the data is spread across a network of nodes, it is significantly more difficult for hackers to compromise the system or tamper with transaction records.
- **Smart Contracts:** Blockchain platforms often integrate smart contracts, which are self-executing contracts with terms directly written into code. These smart contracts can ensure that funds are only released when specific predefined conditions are met.

3. PROBLEM STATEMENT

According to research by the State Bank of India, released in February 2024, the poverty rate in the country fell to 4.5-5 percent in 2022-23. The main problem in this research study here is to find needy people and cover all the issues and problems that they face in daily life.[3]. The project "AIDLINK" seeks to assist individuals willing to offer help to those in need of basic crucial items such as sanitary materials, food, and clothes. The relevance of this project increases during emergencies or disasters because they can respond to existing needs that are time-sensitive and make a greater impact when effectively applied. There is none at the moment, other than the volition of those who want to help, as there is no structured process linking the needy with those willing to assist either directly or through NGOs and this results in unnecessary delays. Moreover, the distribution of the help and ensuring that the intended beneficiaries receive it on time has been an issue. Many people who could have been assisted remain ignored or go without assistance in time due to disorganization.

This project aims to address these challenges — by employing a straightforward web-based application that ensures safe and efficient disbursement of gifts, and presents a channel for the needy to express their requirements and for admins to control the whole system. AIDLINK will incorporate features such as separate dashboards for donors, needy recipients and administrators to provide real time responses for the needy and control the processes for efficiency.

4. AIM AND OBJECTIVES

This project is targeting the development of an online platform named AIDLINK which will help in linking those willing to give essentials like food, clothes, and sanitary pads to those who need them during disasters and other emergencies. AIDLINK represents the one integrated system that would encourage people who want to help, to do so in a more organized and efficient manner.

The main purposes of this project are creating User Interfaces with separate dashboards for admins, Donors, Needy persons and giving each sectional users the capability to make real-time requests, and enabling them to submit their donations and view their donation history.

An emergency assistance section to assist during disasters prioritizing the most urgent needs will be included, and secure interuser communication will be provided. All administrators will have access to manage the system to avoid negligence and all requests will be responded to so that the entire model does not collapse. Finally, the key aim of the project is to provide relief to the sorrow by creating a world where everybody can reach the suffering quickly and easily.

5. PROPOSED SOLUTION

The most favorable solution for the project AIDLINK, put forth by the partners in this project, emphasizes the authoring of the web-based interface that acts as an intermediary between parties tracking essential aid substances such as food, clothing, and sanitary materials, especially in times of crisis. The platform will have three main user roles: Admins, Donors, and Needy Individuals/NGOs, each of them with a dedicated dashboard. Admins will control and registration of users and the requests made, as well as the relevant trends in donations ensuring the most needed ones in a disaster are catered for in time. Donors will be required to log in securely to browse the requests posted and select those they would want to give aid in any particular form while also monitoring their donation history. On the other hand, individuals or NGOs who are needy will create and post their requests with the option of editing them and viewing the progress of their requests. Also, the system is planned to be designed with an Emergency Assistance Section where most of the urgent requests will be shown and covered, and a Notification System about the current status of do-

nation requests and new ones with regards to their volume. This solution seeks to enhance the provision of timely assistance to those in need during a crisis by assisting in the establishment of a clearer order, transparency of processes, and responsiveness within the targeted audience.

Functional and nonfunctional requirements:

1. Functional requirements

- Admin Login: All this while admins are managing users, requests, and donations securely on the platform.
- Donor Login: Donors can log in and browse needs, donate items, or money, and also track their donation made.
- Login for NGO: They log in to request items, update requests, and view donations.
- Dashboard: All the user's donors, admin, and needy possesses a personalized dashboard to manage all the activities.
- Emergency Assistance: Instantly, it will have options for prompt requests and donations in case of disaster and emergencies.
- Notifications: Alerts users about new requests, donations, and critical changes.

2. Non-functional requirements

- User-Friendly: Easy navigation for every end-user.
- Security: Encrypts the data and features secure login credentials.
- Scalability: Handles the growing number of users during peak times without breaking down.
- Performance: It has fast loading times and smooth running even when many users are on the system simultaneously.
- Responsiveness: It is user-friendly on mobile devices for easy access to the system.
- Advantages:
 - The platform is uncomplicated and very user-oriented as both donors and needy people can navigate through the system effortlessly.
 - It allows assistance to be provided at the right time during the critical need, as needs are posted and donors respond.
 - With the removal of intermediaries, there is improved communication and accountability as needy persons interact with donors directly.
 - Donations and requests are updated instantly, therefore, users of the platform are able to know what stage has been reached.
 - The system operates in a transparent manner allowing donors to see how their donations have been used and therefore, enhances the possibility of more donations being made.
 - Admins, Donors, Needy individuals are presented with separate dashboards which add to the proper arrangement of the platform and management of it.
 - It enhances citizens' involvement in helping people when it is most needed, that is, it raises citizens' concerns towards critical situations.

6. CONCLUSION

AidLink - Connect. Donate. Impact is a powerful platform that bridges the gap between those in need and those willing to help. By facilitating donations of essential items such as food, clothing, and sanitary products, particularly during times of emergencies and disasters, AidLink strives to reduce suffering and improve the well-

being of vulnerable communities. The project's user-friendly interface and distinct roles for donors, NGOs, and administrators make the system efficient and accessible. AidLink has the potential to strengthen communities through its focus on generosity, compassion, and com-

munity in-volvement. It fosters connections between individuals and encourages a culture of giving, creating a network of support for those facing difficult circumstances. Offering tools like the emergency assistance section and real-time notifications, it ensures that urgent needs are met promptly, providing a sense of relief and security for those affected. Ultimately, AidLink's success depends on the participation of donors, administrators, and the community at large. Through continued involvement, we can make a lasting difference in the lives of those who need it most, ensuring that help is always available during the most critical times. Together, we can build a stronger, more compassionate community.

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