

Building a Sustainable Future for Charitable Giving: A Critical Analysis of an Application for the Donation Ecosystem.

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ABSTRACT

This research paper explores the effectiveness of donation applications in facilitating charitable giving. The paper investigates the features and design of popular donation applications, their impact on donor behavior, and the benefits and drawbacks of using donation application. The research methodology includes a literature review, survey data analysis, and case studies of organizations that have successfully used donation applications to increase donations. The findings of the study suggest that donation applications are effective in increasing charitable giving by making the donation process convenient, accessible, and secure. However, the success of donation applications is also dependent on factors such as the user experience, the credibility of the organization, and the effectiveness. The paper concludes with recommendations for nonprofits on how to leverage donation applications to maximize their potential and improve donor engagement.

Keywords

“Donation platform,” “Mobile Application”, “Charitable giving”, “Donor Demographics”, “Online Donation”.

1. INTRODUCTION

Food waste is a serious problem in densely populated countries like India. Food wastage is not just a sign of craving or contamination, yet in addition of numerous financial issues. According to the latest survey by The Indian Express ^[1], 1.3 billion tons of food is thrown as waste every year. “India ranks 107th out of 121 countries on Global Hunger Index ^[2]” and according to the ^[3] Food Waste Report 2021 published by the United Nations Environment Program, “50kg of food is thrown away per person every year in Indian homes.” A food donation project is an initiative aimed at reducing hunger and food waste by collecting surplus food from various sources and distributing it to people in need.

Donation applications have become increasingly popular in recent years, offering a convenient and accessible way for individuals to support charitable causes. These applications provide a platform

for donors to connect with nonprofit organizations and support their missions through online donations. Food donation projects are an effective way to address both food waste and hunger. In addition to reducing food waste and helping to feed people in need, they also provide environmental benefits by diverting food from landfills and reducing greenhouse gas emissions associated with food waste. It is a powerful way to help alleviate hunger and promote sustainability in local communities.

This research paper explores the ecosystem of a donation application, analyzing the various technology, and social implications of charitable giving in this context. By studying the interconnectedness of the components of the donation application ecosystem, this paper aims to provide a comprehensive understanding of how our donation application operate and the impact it can have on the nonprofit sector and society at large. The paper will draw on a range of research methods, including the analysis of existing applications, and a survey of user behavior and preferences. The findings of the study will shed light on the challenges and opportunities facing the ecosystem of donation applications and provide recommendations for improving the sustainability, ethics, and effectiveness of these applications.

2. ANALYSIS OF EXISTING APPLICATIONS

In today's environment, the system's requirements are met through websites that are slow to access and provide little information about the service to the public. Since all transactions are handled via intermediaries, there is no direct relationship between the donor and the receiver who comes from an internet source. Another reason is that there is no active mobile application in place to help with the process and make it more fruitful.

2.1 Food Rescue US ^[4]

Food Rescue US is a web-based application operating in regions of United States of America, that recruits volunteers to transport fresh food surpluses from local companies to social service

organizations that serve the food hungry. This software aids in the coordination of food pickups and deliveries between food donors and local hunger relief organizations.

2.2 Left Over Swap

Leftover Swap is a smartphone software that allows you to swap or give away your excess. The App That Encourages People to Share Food and Minimize Waste. Users can use this app to take images of their leftover food and share them with other users, who can subsequently claim and pick it up.

2.3 Food Connect Groups [5]

Food Connect was established in 2014 to answer the question of hunger and food management, they started by collecting extra food from local restaurants and food merchants and delivering it to neighborhood organizations in need. Megha Kulshreshtha's weekend passion project has grown into a countrywide hunger relief logistical solution.

3. FLOWCHART

In the Figure 1. We present the flowchart of the proposed system, as given below, the flow of the application is described diagrammatically. When a new user registers on the application, he/she must verify the registered details and after verification of the entered details, one can select the category in which they intend to donate.

A user can login as a donor or a receiver, and after a successful login they can select a particular category from the different categories available to donate.

A donation request under any category can be made by mentioning a brief description of the items one wishes to donate. It includes a short description about the quality of the item, and the quantity that the donor is willing to donate.

When a successful donation request has been made it can be viewed under the donations tab and anyone who is willing to collect the items can block that request. In this manner any donation can be made.

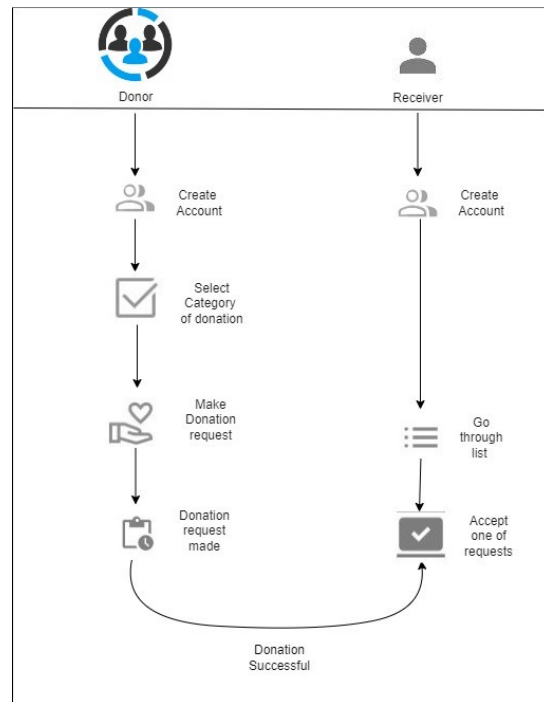


Figure 1. Flowchart of the proposed system.

4. SECTIONS

4.1 Survey Report

4.1.1 Survey

To support and analyze the actual need of the proposed application, we conducted a survey. Key findings are mentioned below as follows:

4.1.1.1 Introduction

The main objective of this study was to find out the factors that influence individual's decisions to donate to other individuals through a donation application. To achieve this objective, we conducted a survey of individuals who have donated in the past. In this paper, we present the results of our survey and discuss the implications of our findings.

4.1.1.2 Literature review

Previous research has shown that social norms, trust, and perceived effectiveness are key factors that influence individuals' decisions to donate to other individuals. However, there is limited research on the specific factors that drive individual's decisions to donate through donation applications. Our survey contributes to the existing body of knowledge by identifying the key factors that drive donations through this channel.

4.1.1.3 Method

We conducted a survey of 450+ individuals who have donated in the past. Majority of the participants are the students of MIT ADT University, Loni-Kalbhor, Pune Maharashtra. The survey instrument consisted of questions about social norms, trust, perceived effectiveness, and donation motivations. Data was collected using an online survey platform (Google form), and statistical analyses were conducted using graphs and pie charts.

4.1.1.4 Result

The results of the survey shows that social norms, trust, perceived effectiveness, and donation motivations are all important factors that influence individual's decisions to donate through a donation application. This also states that a digital platform will ease the process of donating and will eventually increase the frequency of making a successful donation as shown in the fig.2

4.1.1.5 Discussion

Our findings highlight the importance of social norms, trust, and perceived effectiveness for encouraging donations through a donation application. Donation applications should focus on building trust and providing information about the effectiveness of charitable organizations in order to enhance donations. However, our study also has some limitations, such as the use of a convenience sample and the reliance on self-reported data. Future research could address these limitations by using a larger and more diverse sample, and by using objective measures of donation behavior.

4.1.1.6 Conclusion

In conclusion, through the survey conducted by our team we found that 69.8% of the participants agree that a digital platform will ease the process of donating. Our findings have important implications for donation application provider. We can use this information to develop effective donation strategies and marketing campaigns. Overall, our study contributes to a better understanding of the drivers of donations through donation applications, and suggests avenues for future research.

Do you think a digital platform will ease the process of making a donation.
460 responses

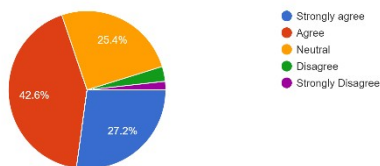


Figure 2. Pie chart presenting the survey result.

This figure shows the result of the survey conducted by our research team and finally demonstrates the actual need of and online platform to ease the process of donating.

4.2 Technology Used

Various technologies used to develop our application are as follows:

4.2.1 XML

XML (*extensible Markup Language*) is for frontend development, for defining user interface layouts using XML-based markup languages such as XAML (Extensible Application Markup Language) or Android XML. These markup languages allow frontend developers to create layouts using declarative syntax, making it easier to define complex user interfaces.

4.2.2 JAVA

Java is used here for developing the backend of the application as Java is quite scalable, provides security, it is platform independence, it also consists of robust APIs and libraries, and it is object-oriented programming which makes it a suitable choice for backend development in our project. It is well-suited for developing enterprise-grade applications that require high levels of performance, security, and scalability.

4.2.3 Database - Firebase

We have used firebase for a real-time database, user-authentication, and cloud storage for the application's data. This real-time, NoSQL database is particularly well-suited for our mobile application.

5. ACKNOWLEDGEMENT

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6. CONCLUSION

In conclusion, the donation application proposed in this research paper offers a sustainable solution to the problem of charitable purpose "Donations". The model integrates current technology to simplify the donation process, making it easier for donors to contribute to their preferred charities. Importantly, the application offers transparency and accountability in the distribution of registered donations, ensuring that it reaches their intended recipients.

Additionally, the platform's capacity to enable recurring donations provides ongoing support for humanitarian activities. The application is a suitable tool for people from all walks of life to assist charity initiatives due to its usability and accessibility. Overall, the donation application described in this research paper has the potential to significantly impact the contribution landscape, optimizing the efficiency and effectiveness of their donations.

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