NOVEL PLATFORM FOR NEW-AGE SKILL BASED FINANCIAL CROWDFUNDING APPLICATIONS

Ujjwal Kumar, Department of Electronics and Communication Engineering, JIS College of Engineering, Kalyani, Nadia WB India,

Zia Tasneem, Department of Electronics and Communication Engineering, JIS College of Engineering, Kalyani, Nadia, WB, India,

Sachin Kumar Dhuriya, Department of Electronics and Communication Engineering, JIS College of Engineering, Kalyani, Nadia WB India,

Ankur Sarkar, Department of Electronics and Communication Engineering, JIS College of Engineering, Kalyani, Nadia WB India

Raj Shaw, Department of Electronics and Communication Engineering, JIS College of Engineering, Kalyani, Nadia WB India,

Vimal Anand, Department of Electronics and Communication Engineering, JIS College of Engineering, Kalyani, Nadia WB India,

Mr. Anirban Ghosal, Assistant, Professor, Department of Electronics and Communication Engineering, JIS College of Engineering, Kalyani, Nadia WB India,

Dr. Bikramjit Sarkar, Professor, Department of Computer Sc. & Engineering, JIS College of Engineering, Kalyani, Nadia WB India,

Dr. Indranath Sarkar, Professor, Department of Electronics and Communication Engineering, JIS College of Engineering, Kalyani, Nadia WB India,

Abstract

The world is full of individuals who are willing to make a difference, contribute to the betterment of society, and help those in need. Traditional web-based fundraising applications have mainly focused on monetary donations. Most funds operate on a grant model, where donors fund a project or build a project without expecting a return. His tools are often not readily available. In this paper, we proposed the EmpowerU website to address such issues. A unique feature of EmpowerU is its new rewards program. Donors don't just give money they also get some kind of reward that shows appreciation. For every contribution, whether financial or technical, donors are rewarded. This award is a mark of appreciation for their generosity and is an incentive for their continued contribution to the integration of artificial intelligence Support models for the presentation of the project and support for the user.

Keywords— EmpowerU, Donation, Problem Statement, Methodology, AI assistance, Crowdfunding.

I. Introduction

EmpowerU is an innovative web technology platform that blends traditional crowdfunding with skill-sharing components, incorporating artificial intelligence features. Effective communication with stakeholders is crucial in the nonprofit sector [1] for building a strong reputation, securing financial resources, and ultimately advancing an organization's mission. In a previous study [5], the research aimed to enhance understanding of the practical and theoretical impacts of fundraising via community college websites. This was achieved by conducting a field experiment on a webpage of an online donation platform [10]. In our experiment, donors who completed an online transaction were studied to assess the influence of incentives on fundraising willingness. Donors were assigned to one of three groups, where the organization added either $0, $1, or $5 in the donor's name in return for sharing information. As nonprofit

organizations increasingly engage in international development, securing financial resources has become pivotal [2] for determining their objectives and performance without profit-making motives. This study analyzes the factors influencing donation intentions in response to nonprofit television fundraising campaigns. It aims to streamline the donation process for donors, making it more effective [3] and efficient. Findings indicate that social factors negatively impact donation intentions; individuals with higher social standards are more inclined to offer direct assistance or donations rather than using online systems. Despite the growing interest in crowdfunding, limited research has explored how requests are presented [7] on personal fundraising platforms. Successful crowdfunding campaigns often leverage existing online social networks rather than building community through the platform itself. This research introduces the "e-Panti" web-based orphanage information system to facilitate donations [4]. Benefactors can access orphanage profiles, orphan lists, activities, and donation procedures through this system. The system received a user acceptance rate of 77.50% based on questionnaire results. The objective of this paper is to examine the relationships nonprofit organizations establish [9] with their annual giving and major gift donors, comparing the differences between donation levels. The study categorized donors into major gift and annual giving donors, shedding light on the dynamics of the fundraising process. This paper analyses the possibility of applying social marketing to civil society organizations to raise funds for their programs and projects.[15] As a result, the organizational and program adjustment to the new conditions in their environment as well as the implementation of the appropriate marketing strategy towards potential donors from the business sector become major determinants of their business strategy In initiatives where contributions are made through skills or finances, a common challenge is the lack of equitable rewards, potentially demotivating participants and jeopardizing sustainability. Drawing on the authors' extensive experience, this book provides guidance that will enable readers to establish and maintain an efficient and effective fundraising program.[14] Demonstrating that a strategic fundraising management plan is critical for identifying areas of growth, the authors also clarify how it helps to leverage an institution's resources and connections and ensure that time and budget are invested into the right activities. Faced with large humanitarian emergencies like the earthquakes in Haiti and Japan, aid agencies have to decide how to collect money for their relief work.[12] In this paper, we analyze impacts of this decision on donors, aid agencies, and policy makers. To this end, we compare two prevalent fundraising modes using optimization models: fundraising with the option of earmarking donations and fundraising without an earmarking option. We study a form of threshold matching in fundraising where donations above a certain threshold are topped up with a fixed amount.[13] We show theoretically that threshold matching can induce crowding in if appropriately personalized. In a field experiment, we explore how thresholds should be chosen depending on past donations. The optimal choice of thresholds is rather bold, approximately 75% above past donations. With global labor shortages affecting charitable organizations, artificial intelligence (AI) chatbots have been deployed to address this challenge [6]. However, the capabilities and limitations of AI fundraisers warrant further investigation; results indicate that visual cues did not significantly influence the relationship between chatbot emotional expressions and willingness to donate. In initiatives where contributions are made through skills or finances, a common challenge is the lack of equitable rewards, potentially demotivating participants and jeopardizing sustainability. Online donation-based crowdfunding has brought new life to charity by soliciting small monetary contributions from crowd donors to help others in trouble or with dreams.[8] However, a crucial issue for crowdfunding platforms as well as traditional charities is the problem of high donor attrition, i.e., many donors donate only once

Figure 1: landing page

or very few times within a rather short lifecycle and then leave. Thus, it is an urgent task to analyze the factors of and then further predict the donors' behaviors.

In this paper, the authors reported on a software application that aims to identify a unique feature of a banking system, namely its new reward system. Donors not only provide funds, but they also get paid. For every contribution, whether financial or technical, donors are rewarded. These awards serve as a mark of appreciation for their generosity and motivate them to continue giving. This report examines various aspects of this web application, examining its characteristics, usefulness, and impact on society. It attempts to shed light on how EmpowerU is changing the landscape of giving and empowering individuals to make a difference.

II.   Technology and Methodology

The initiative understanding for the web application EmpowerU is elaborated in Fig.2. It explains the outlook of the portal which are implemented in the application. This depicts the user journey on the EmpowerU web application, focusing on fundraising projects through user donations. Here's an elaboration on the process:
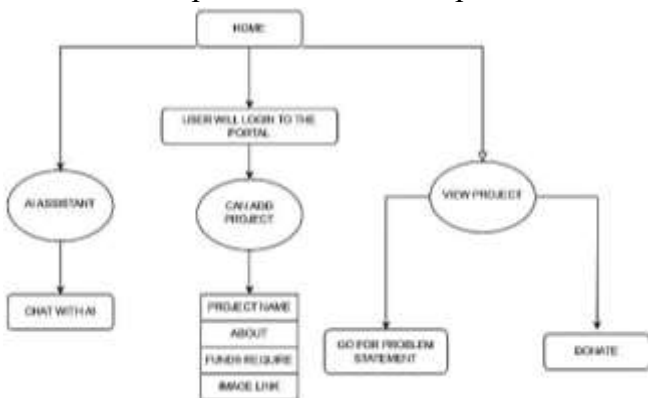

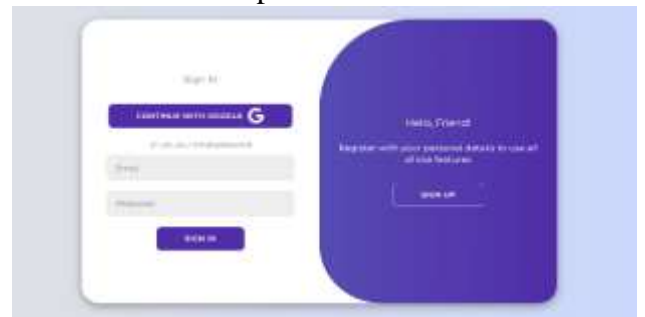Figure 1: Block Diagram representation of working principle.

Figure 3: Login sign up

a. Home and Login:

Figure 1 shows that the user has arrived at the EmpowerU homepage. They enter their login credentials (username and password) as shown in Figure 3 to access the functionality of the application.
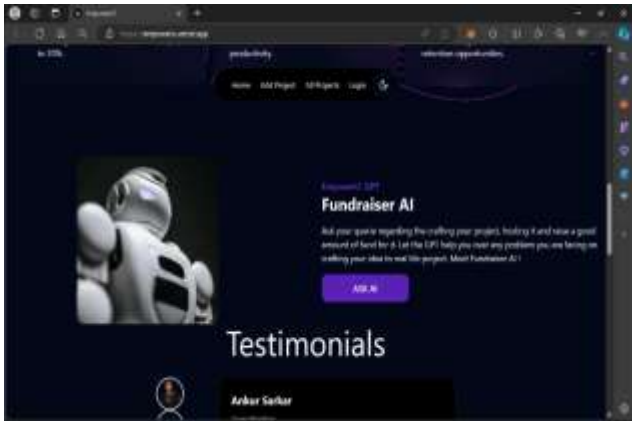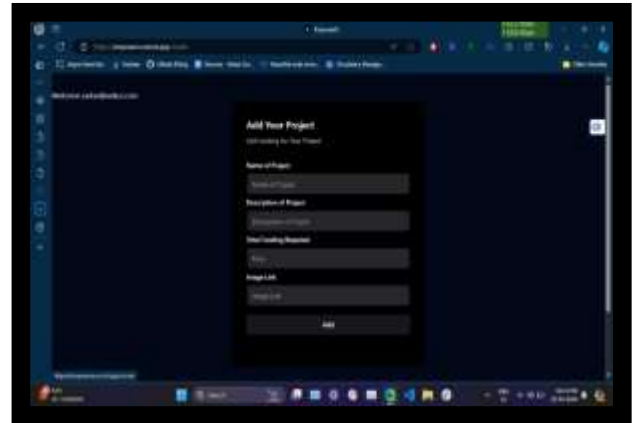

Figure 2: AI assistance.

Figure 3: Managing the portal.

b. AI Assistant Interaction (Optional):

As shown in Figure 4 after login, users are presented with the option to interact with the AI assistant. This AI assistant can answer questions about the platform, guide users through use, and provide personalized recommendations based on their interests

c. .Project Management:

Figure.5 shows that a user who wants to create a fundraiser can access the creation phase of the project. Here they will provide information about their project, including a clear and concise project name, a detailed description explaining the project's goals, objectives and impact and the targeted amount of funding required to complete work is included. An image link that visually represents the project (optional but can significantly increase user engagement).

d. Problem Statement (Optional):

This step allows users to detail the specific problem their project is solving. They should be able to explain the challenges they face following the steps shown in Figure 6(a) and how their project aims to solve them.

e. Project Viewing and Donations:

Once logged in, users can browse the various services listed on the platform. Project information, details, funding goals, and progress indicators (amount of funds raised to date) may be displayed for each project.

Figure 4(a): Portals of donation and problem statement.

Users who find a project they want to support can donate directly through the platform. EmpowerU provides secure payment gateways to ensure a smooth donation process.

f. Token of appriciation :

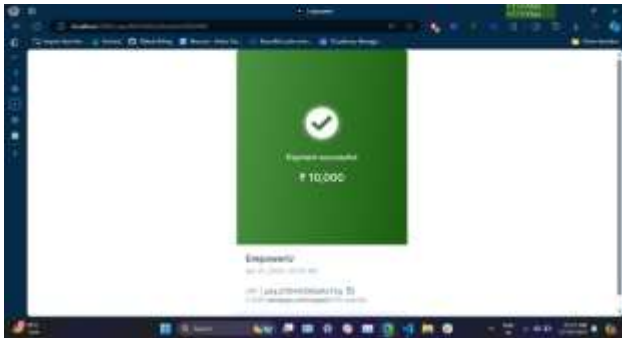Users who actively contribute to open-source projects should be recognized and rewarded for their efforts. By giving them a token of appreciation, we can encourage them to continue contributing their knowledge and encourage their growth in the open-source community. Users can then redeem these tokens to gain access to open-source contribution courses to further enhance their skills and knowledge In addition, skill contributions and… financial contributions are included This provide a closed system in which user contributions are directly acknowledged and opportunities to gain valuable knowledge They are rewarded.

Figure 6(b): Final result.

III. Result and Discussions

While traditional web-based fundraising has changed the way organizations raise money, it is not without its limitations. Forums like EmpowerU, which matches donors and accepts skills-based contributions, represent the next step in fundraising growth. However, safety is a key area that needs to continue to be addressed for continued improvement.

The Successful testing of the prototype is shown above in Fig. 6. (b) where complete project prototype is demonstrated.

IV. Further Development Prospects

Integrating location filtering for personal interaction Our first goal is to integrate sophisticated location filtering into our platform. The importance of place-based services cannot be overstated, as it connects users with causes that match them locally and creates competition among providers In order to encourage innovation and excellence, we will introduce a competitive element to our providers. Drawing inspiration from successful events such as Google Summer of Code, we will be creating a series of challenging awards that encourage our community to give their best .

V. Conclusion

While traditional web-based fundraising has changed the way organizations raise money, it is not without its limitations. Platforms like EmpowerU that match donors and accept skill-based donations represent the next step in fundraising growth. But safety is a key factor that needs to be addressed in order to continue to improve and win this conference. Building a successful crowdfunding business requires careful planning, management and incentives. By following the steps outlined in this guide you can increase your chances of creating a strong campaign that attracts supporters and helps achieve targeted funding goals Remember to tell a story Stimulate attention, show good users, offer rewards and engage with target audiences A successful fundraising campaign that brings a proven project to life is an important step in crowdsourcing creating a successful financial campaign to identify target audiences and create compelling campaigns can lead to great results Start with proper market research and then focus on campaigns that speak to the heart and direct attention to the background. With a well-crafted strategy and campaign, their winning crowdfunding strategy can become a reality.

References

[1] Suh, Jiwon, Trang Hoang, and Imane Hijal-Moghrabi. "Nonprofit external communications: General management, public relations, or fundraising tool?." Journal of Public and Nonprofit Affairs 7.2 (2021): 220-239

[2] PARK H, Cho Y. Financial sustainability of nonprofit organizations: Determinants of fundraising campaigns on donation intention. The Journal of Industrial Distribution & Business. 2020;11(3):19-28.

[3] Husni, Husni, et al. "Development of a Web-Based "Let's Donate" Fundraising Information System." E3S Web of Conferences. Vol. 328. EDP Sciences, 2021. Paper

[4] Mauliana, Phitsa, Ricky Firmansyah, and Ai Dewi. "Web-Based Orphanage Fundraising Information System." Proceedings of the 7th Mathematics, Science, and Computer Science Education International Seminar, MSCEIS 2019, 12 October 2019, Bandung, West Java, Indonesia. 2020.

[5] McAllister, Sheila Marie. "Toward a dialogic theory of fundraising." Community College Journal of Research and Practice 37.4 (2013): 262-277.

[6] Park, Gain, Jiyun Chung, and Seyoung Lee. "Scope and limits of AI fundraisers: Moderated serial multiple mediation model between artificial emotions and willingness to donate via humanness and empathy." Technological Forecasting and Social Change 201 (2024): 123211.

[7] Paulus, Trena M., and Katherine R. Roberts. "Crowdfunding a "Real-life Superhero": The construction of worthy bodies in medical campaign narratives." Discourse, Context & Media 21 (2018): 64-72.

[8] Zhao, Hongke, et al. "Voice of charity: Prospecting the donation recurrence & donor retention in crowdfunding." IEEE Transactions on Knowledge and Data Engineering 32.8 (2019): 1652-1665.

[9] Waters, Richard D. "Applying relationship management theory to the fundraising process for individual donors." Journal of Communication Management 12.1 (2008): 73-87.

[10] Castillo, Marco, Ragan Petrie, and Clarence Wardell. "Fundraising through online social networks: A field experiment on peer-to-peer solicitation." Journal of public economics 114 (2014): 29-35.

[11] Hansen, Ruth K. "Applying a stakeholder management approach to ethics in charitable fundraising." Journal of Philanthropy and Marketing 28.4 (2023): e1731.

[12] Toyasaki, Fuminori, and Tina Wakolbinger. "Impacts of earmarked private donations for disaster fundraising." Annals of Operations Research 221 (2014): 427-447.

[13] Adena, Maja, and Steffen Huck. "Personalized fundraising: A field experiment on threshold matching of donations." Journal of Economic Behavior & Organization 200 (2022): 1-20.

[14] Brueggemann, Kate, and Donna McGinnis. Fundraising Management in a Changing Museum World. Taylor & Francis, 2023.

[15] BALoG, A. N. T. A. L. "Applying social marketing in fundraising activities to civil society organizations." International Journal of Management Cases 13.3 (2011): 416-430.