International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

दान-Setu: Mapping Ngos with Compassionate Volunteers Through Virtual Crowdsourcing @ Bridging Borders Global Change

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Abstract:

DaanSetu is an innovative platform designed to overcome the fragmentation in the charitable sector by offering a centralized space for NGOs and donors to connect seamlessly. Many NGOs struggle with visibility and communication when it comes to their material and finances, and donors are often uncertain about where their contributions would have the most significant impact. The digital-driven volunteering will connect the NGOs to achieve their objective via the freelance Platform that will optimize the benefit for the people in need. DaanSetu resolves this by providing an organized, transparent, and user-friendly platform that allows donors to directly contribute to specific causes, ensuring that their support reaches those who need it most. The crowdsourcing concept is used to attract the compassion of volunteers to tap into freelance expertise, connecting the changemakers, freelancers, and NGOs for Social projects by improving the efficiency of charitable efforts, DaanSetu aims to foster greater collaboration and ensure that resources are allocated where they are most needed.

The proposed दान-Setu research focuses on mapping NGOs with compassionate volunteers through virtual crowdsourcing to bridge the borders for global wellbeing and to change life of people in who need helping hands.

Keywords: Digital Volunteering, Crowdsourcing Compassion, Online Talent Search, Empowering NGOs through Technology, Virtual Volunteering, Bridging Borders Global Change, Transforming NGO Outreach, Mapping NGOs with Volunteers through Virtual Platform.

1. INTRODUCTION

DaanSetu is an innovative platform designed to overcome the fragmentation in the charitable sector by offering a centralized space for NGOs and donors to connect seamlessly. Many NGOs struggle with visibility and communication when it comes to their material and finances, and donors are often uncertain about where their contributions would have the most significant impact. DaanSetu resolves this by providing an organized, transparent, and user-friendly platform that allows donors to directly contribute to specific causes, ensuring that their support reaches those who need it most. By improving the efficiency

of charitable efforts, DaanSetu aims to foster greater collaboration and ensure that resources are allocated where they are most needed. To transform NGO outreach to create a global impact and to empower the NGOs through skilled volunteers from worldwide. The proposed work will create a global impact, by empowering NGOs through freelance volunteer networks. The digital-driven volunteering will connect the NGOs to achieve their objective via the freelance Platform that will optimize the benefit for the people in need. The proposed NGO collaboration through the interested online talent will bridge the borders and barriers of NGOs by leveraging freelancers for global change. The crowdsourcing concept is used to attract the compassion of volunteers to tap into freelance expertise, connecting the changemakers, freelancers, and NGOs for Social projects.

2. LITERATURE REVIEW OF EXISTING SYSTEMS

S. No.	Paper Name	Objective	Results	Technology Used
1	Webapp Service for Providing Information About NGOs	Develop a website consolidating NGO information, categorized by location and services, to enhance accessibility.	Efficient NGO discovery through detailed categorization and Google Map links.	HTML5, CSS3, JavaScript, Node.js, MongoDB, Figma
2	Blockchain-Enabled Supply Chain Transparency and Smart Contracts for Humanitarian Aid Operations	Integrate blockchain technology for transparency, accountability, and efficiency in humanitarian aid supply chains.	Successfully tested the "HumanitarianAid" smart contract on Ethereum, ensuring secure and transparent aid distribution.	Ethereum Blockchain, Smart Contracts, Remix IDE
3	NGO CONNECT: Technology for Non-Profit Organization Management	Create a centralized platform for NGO-donor interactions, enhancing transparency, donation tracking, and volunteer coordination.	Improved transparency with AI voice assistance and 79% accuracy in volunteer matching.	React, MySQL, Firebase, Alan Studio, Random Forest ML Model
4	Empowering Nonprofit Organizations to Reduce Donation Attrition with Machine Learning	Develop a data-driven ML framework to analyze donor behavior and reduce donation attrition through targeted campaigns.	Segmented donors into actionable groups, enabling targeted campaigns to reduce attrition.	K-Means Clustering, RFM Model, Box-Cox Transformation, SFTP

5	Women Empowerment and Governance through Digitization of NGO Management Systems	Enhance NGO operational efficiency, data security, and real-time access to empower women in project tracking and data management.	Minimized data duplication by 60%, improved real-time access, and streamlined project tracking.	Laravel, MySQL, Android OS, Google Cloud
6	Ek Ka Josh - Cloud-Based Mobile Application for NGOs	Create a mobile platform to connect NGOs and donors, encouraging micro-donations as low as ₹1.	Improved user engagement and transparency with real-time impact visualization.	Ionic Framework, Laravel, MySQL, AWS, UPI Integration
7	Mobile Application-based Charity Using IoT for Feeding the Need to Feed NGO	Integrate IoT with mobile applications to address urban poverty and optimize resource allocation for charitable activities.	Achieved better NGO outreach and 97.5% interest in using the app.	IoT Integration, Mobile Technology Platform
8	Lightweight Social Organization and Coordination System for Non-Profit Associations	Develop a cost-effective, easy-to-use online system for small non-profits to manage resources and volunteers effectively.	Reduced task management errors and manual work, improving volunteer engagement.	Flutter Framework, Dart, Firestore
9	NGO Portal - A Platform to Connect NGOs with Prospective Members	Create a centralized platform for NGOs to improve communication, publicity, and public trust.	Improved NGO credibility, transparency, and public interaction.	ReactJS, Redux, Node.js, Express.js, MongoDB, Mongoose
10	Identifying Micro-influencers on social media Using User Graph Construction Approach	Utilize a graph-based approach to model social networks and identify micro-influencers.	Identified potential micro-influencers using a weighted graph approach.	Facebook Graph API, Neo4j, PageRank Algorithm, HITS Algorithm

3. PROPOSED SYSTEM DESIGN

The rationale behind the DaanSetu initiative is driven by the need to bridge the fragmentation in the charitable sector and enhance the efficiency of charitable efforts. Many NGOs struggle with visibility and communication, making it difficult for them to secure financial and material support. At the same time, donors often face uncertainty regarding the impact of their contributions. To address these challenges, DaanSetu provides a centralized, transparent, and user-friendly platform that enables direct engagement

between donors and NGOs. By allowing donors to contribute to specific causes, the platform ensures that resources reach those who need them the most. Additionally, the structured approach of DaanSetu fosters greater collaboration among stakeholders, optimizing the allocation of charitable resources. Through its innovative framework, the platform not only improves accessibility and trust in charitable giving but also empowers NGOs to focus on their core mission while securing the necessary support seamlessly.

4. METHODOLOGY AND ALGORITHMS USED

4.1 International Status of NGO Collaboration with Skilled Volunteers Worldwide

The main focus of the proposed work is to connect the NGOs with skilled volunteers. The global efforts in digital charity and donor engagement through the digital platform, to provide valuable insights for the beneficiaries.

GoFundMe and JustGiving – These platforms have transformed crowdfunding and charitable giving by enabling direct contributions to verified causes with transparent tracking of donations.

GlobalGiving – A worldwide network that connects donors with grassroots NGOs, ensuring project transparency and impact assessment.

Charity Navigator and GuideStar – These platforms provide detailed NGO evaluations, enhancing donor confidence through credibility checks and impact assessments.

United Nations' Digital Charity Initiatives – UN-backed platforms promote digital solutions for humanitarian aid, ensuring efficient allocation of funds in disaster relief and development projects.

4.2 National Status of NGO Collaboration through Freelancing Websites to Connect with Volunteers

India has witnessed significant advancements in technology-driven charitable platforms, reflecting a growing commitment to digital philanthropy.

GiveIndia and Milaap – These platforms facilitate crowdfunding for NGOs and social causes, ensuring transparency and verified donations.

PM CARES Fund and State Relief Funds – Government-driven digital platforms enable direct contributions for disaster relief and social welfare.

Aadhaar-Linked NGO Verification – Digital verification systems ensure accountability and prevent fraudulent charity campaigns.

CSR Initiatives by Corporates – Many Indian companies integrate digital donation platforms into their Corporate Social Responsibility (CSR) strategies, enhancing accessibility and donor trust.

These global and national initiatives highlight the increasing adoption of digital transparency, real-time tracking, and direct donor engagement, forming the foundation for DaanSetu's development as a centralized, transparent, and impact-driven charitable ecosystem.

5. PROJECT FUNCTIONAL MODULES IMPLEMENTATION

The DaanSetu platform is designed to provide a seamless and efficient experience for donors and NGOs, ensuring transparency and accessibility in charitable giving. The development of this platform involves several functional modules, each dedicated to a specific aspect of the service. Below are the key functional modules required for DaanSetu's development:

1. Home Page:

The home page serves as the central hub, providing users with an overview of the platform and its features.

Key Features:

- Introduction to DaanSetu, its mission, and how it works.

- Quick access to NGO listings, ongoing campaigns, and recent donations.
- Search and filter options for donors to explore causes by category, location, and urgency.
- Highlights of featured NGOs and success stories.

2. User Registration and Authentication:

To enable NGOs and donors to create accounts and securely access the platform.

Key Features:

- User registration via email, phone number, or social media accounts.
- Secure login and logout functionality.
- Password recovery and reset options.
- Two-factor authentication for enhanced security.

3. NGO List Page:

A dedicated page that provides a directory of registered NGOs, helping donors explore various causes.

Key Features:

- Categorized listing of NGOs based on focus areas (e.g., education, healthcare, disaster relief).
- Search and filter functionality to find NGOs based on location, impact, and funding needs.
- NGO rating and verification status to ensure donor trust.
- Sorting options based on urgency, popularity, or recent activity.

4. NGO Data Page:

Provides detailed insights into each NGO, helping donors make informed decisions.

Key Features:

- Comprehensive NGO profile with mission, vision, and key projects.
- Impact reports showcasing how past donations have been utilized.
- Transparency metrics such as fund allocation breakdowns.
- Testimonials and case studies highlighting the NGO's work.

5. NGO Requirements Page:

A dedicated space for NGOs to list their current needs, including monetary donations, material support, and volunteers.

Key Features:

- NGOs can post real-time updates on urgent requirements.
- Donors can contribute directly by choosing from listed needs.
- Tracking system to show how donations fulfill specific NGO needs.
- Integration with payment gateways for direct monetary donations.

6. Contact Us Page:

A support module for users to reach out for assistance, collaborations, or inquiries.

Key Features:

- Contact form for queries and support requests.
- Helpline details for direct communication.
- NGO onboarding assistance for new organizations.
- FAQs covering common questions related to donations and NGO verification.

By implementing these functional modules, DaanSetu will offer a transparent, user-friendly, and impactful platform that bridges the gap between donors and NGOs, ensuring that contributions reach those in need efficiently.

6. दान-Setu PROTOTYPE, ALGORITHM AND PROGRAM LOGIC

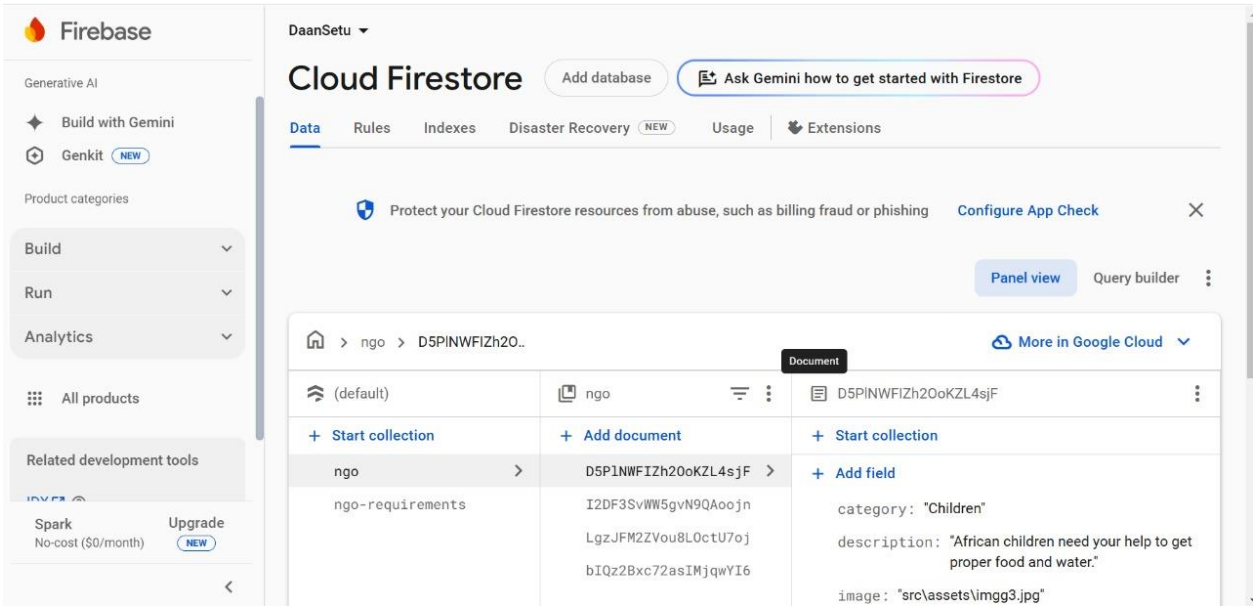

Figure 1: NGO Data in Firebase of NGO Collaboration with Freelancing Websites to Connect with the World

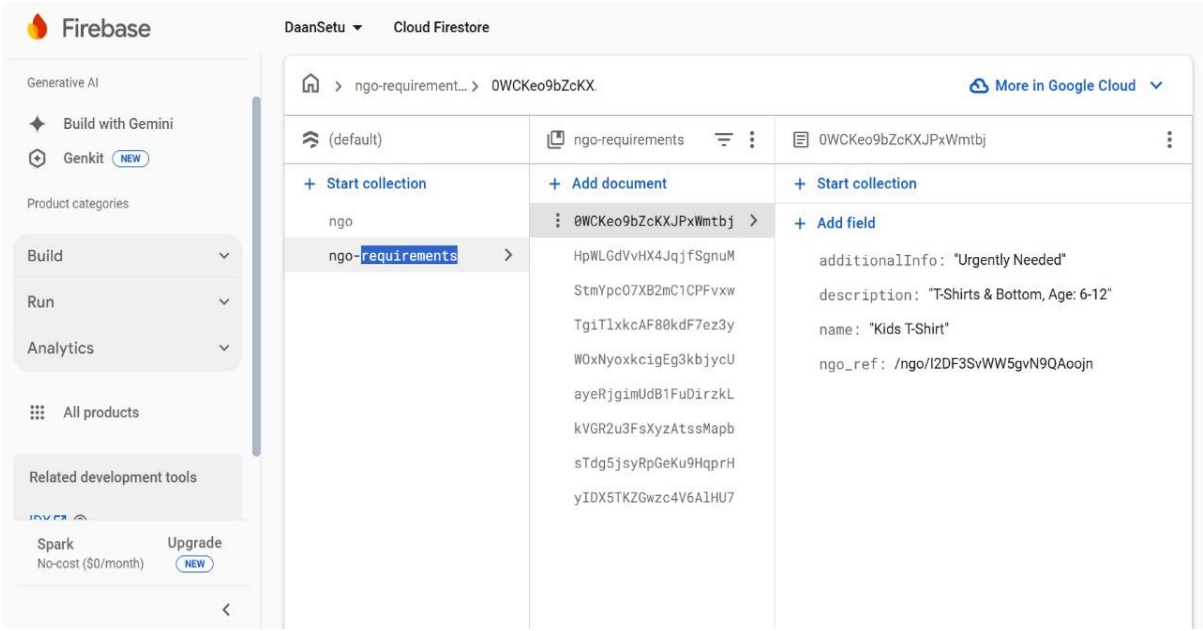

Figure 2: Data of NGO Requirements of NGO Collaboration with Volunteers to Connect with the world

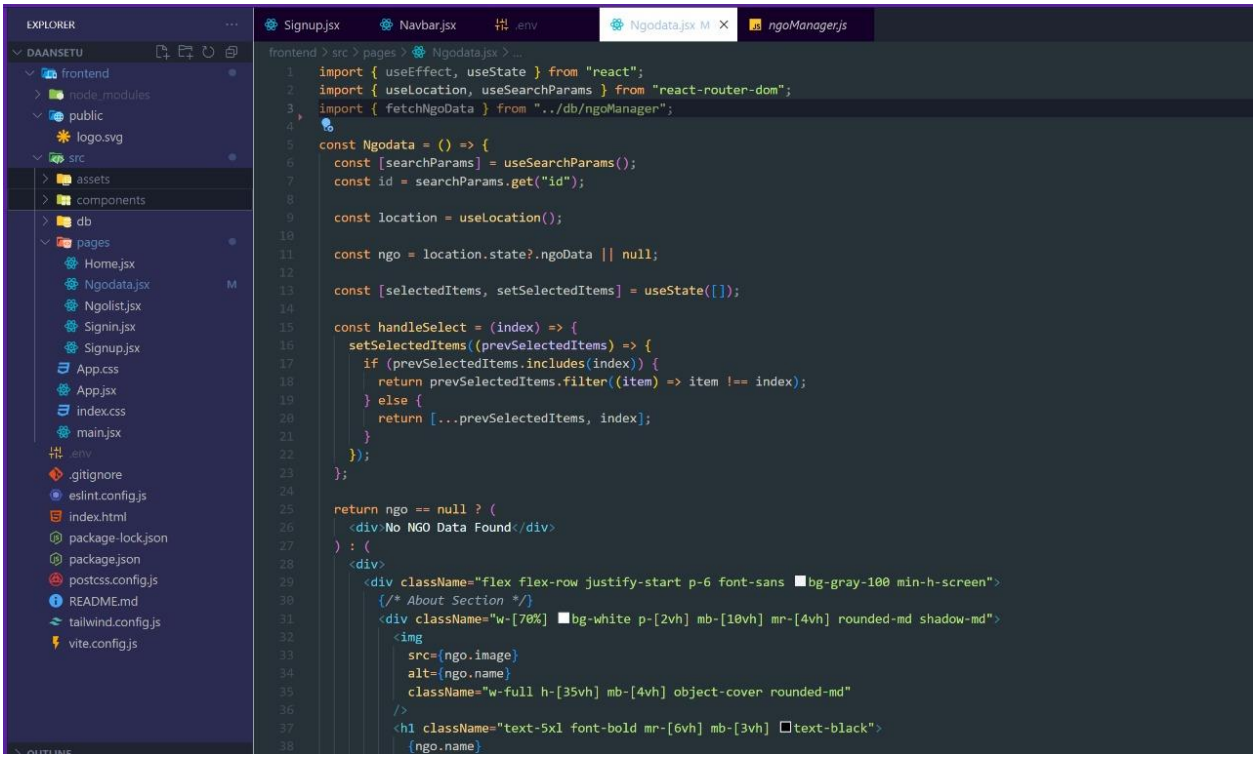

Figure 3: Algorithm for selecting items and retrieving NGO data of NGO Collaboration with Freelancing Websites to Connect with the world

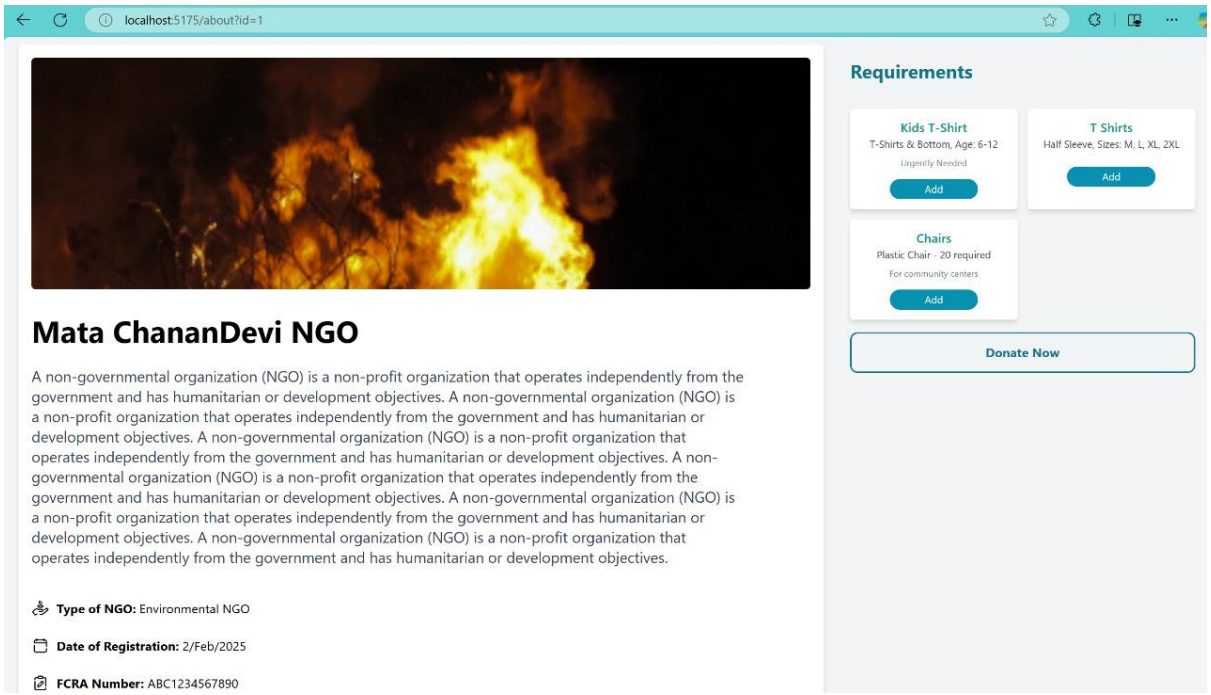

Figure 4: code output in Front End of NGO Collaboration with Freelancing Websites to Connect with the world

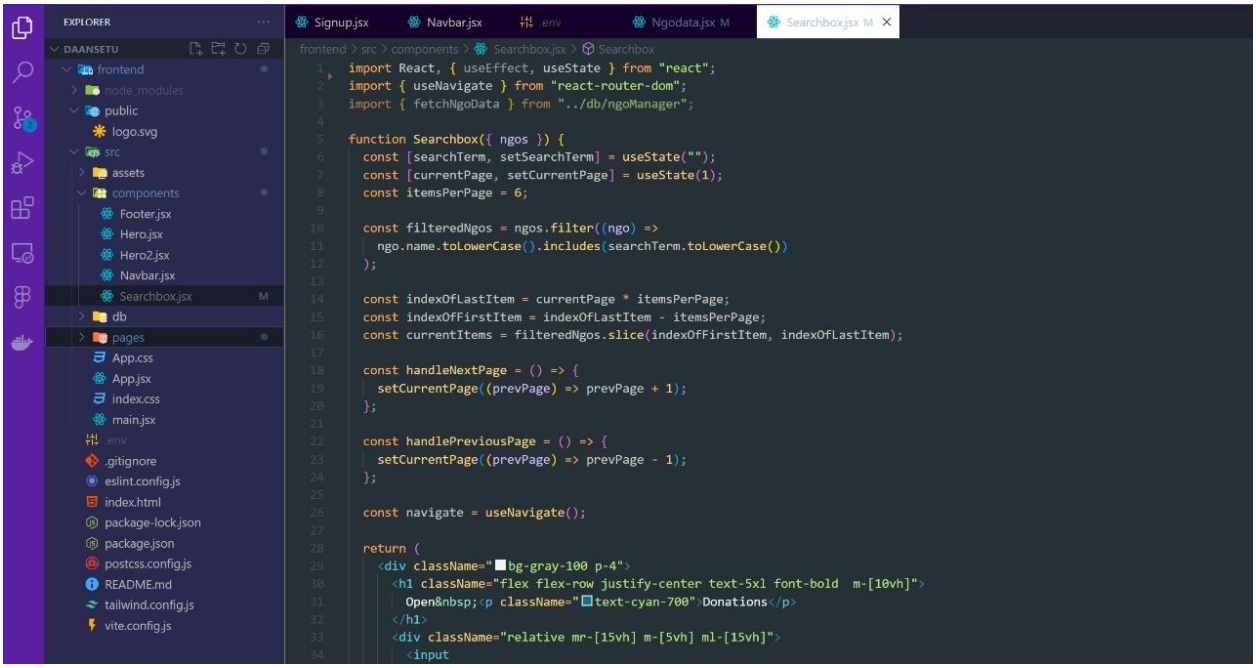

Figure 5: Algorithm for searching NGOs from a list of global NGOs

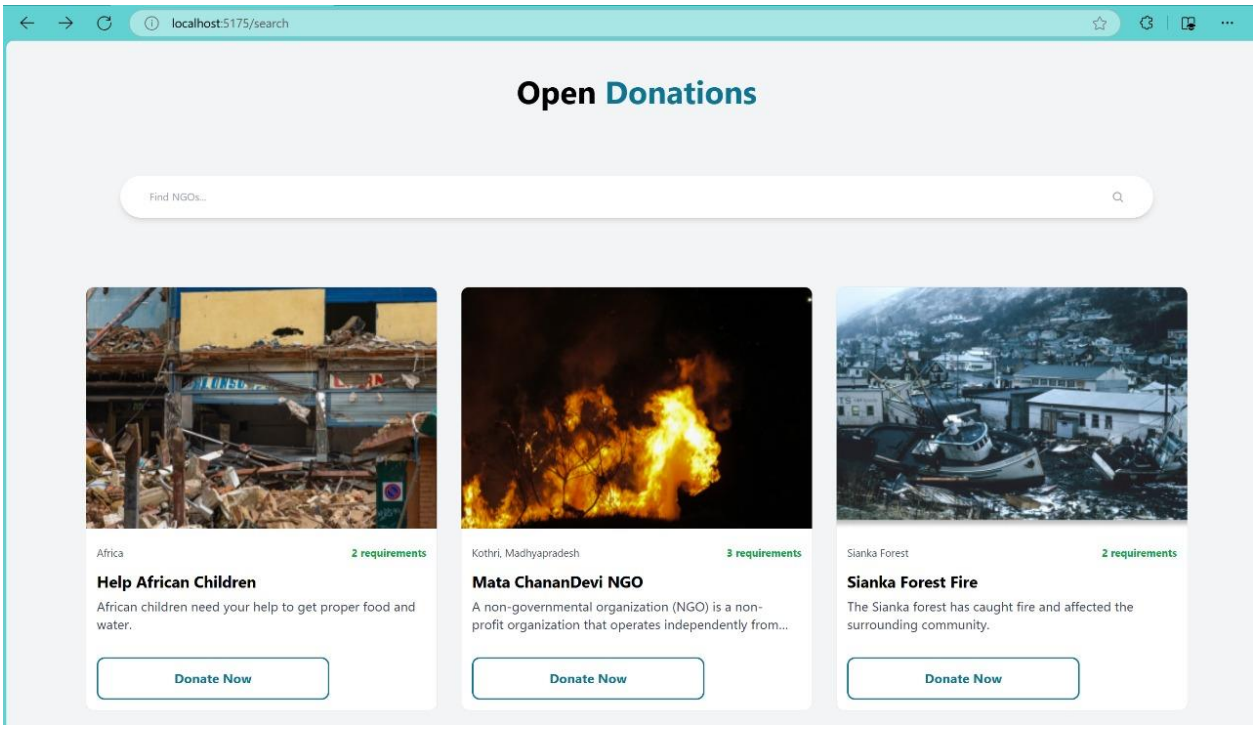

Figure 6: NGO Collaboration with Volunteers to Connect with the Skilled Talents

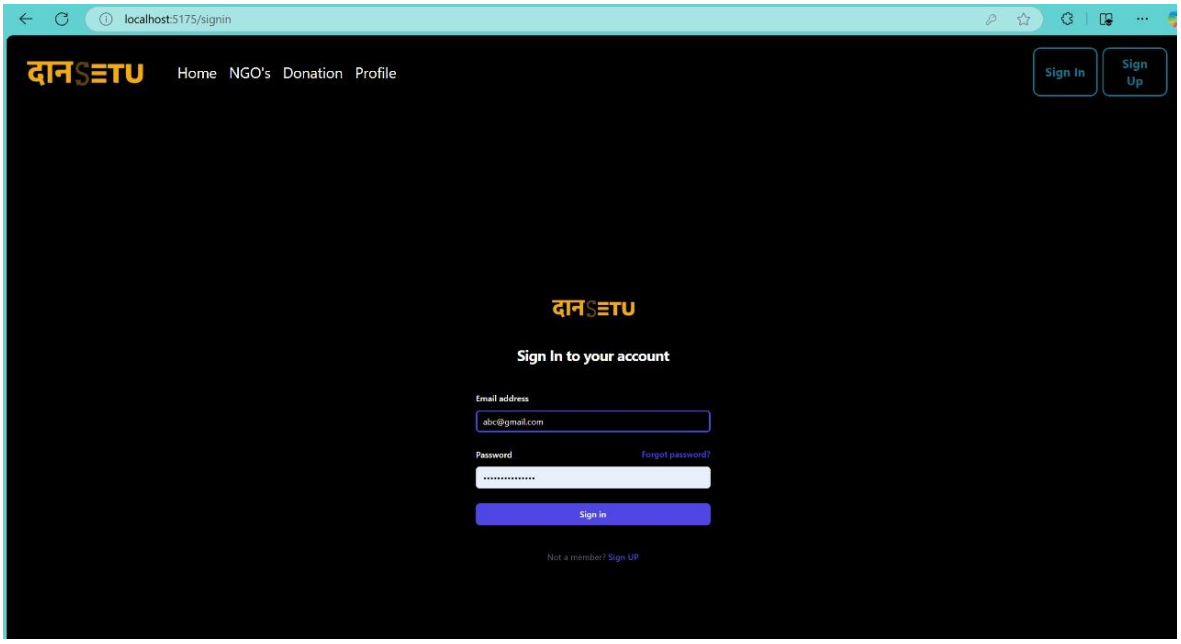

Figure 7: Login page Freelancing for Good: Connecting NGOs with Skilled Volunteers Worldwide

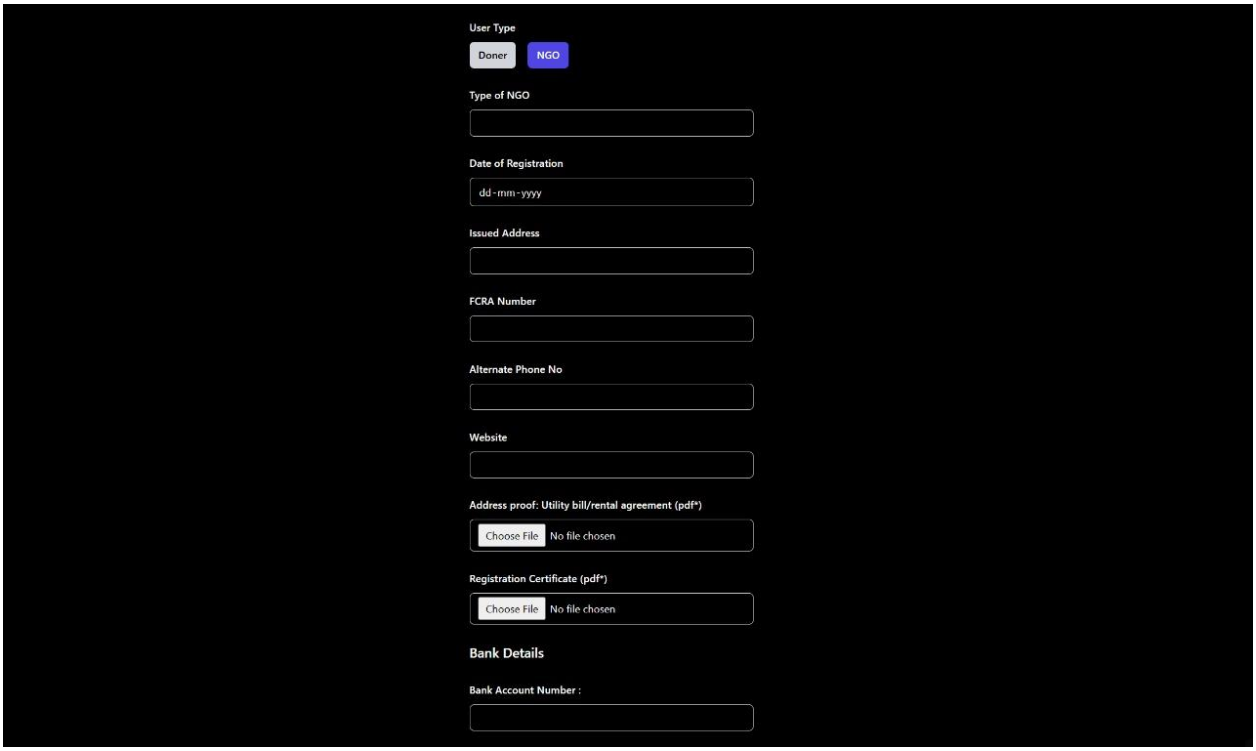

Figure 8: Signup as an NGO to connect with Volunteers to contribute social projects

7. METHODOLOGY FOR DEVELOPING THE दान-Setu SYSTEM

1. Needs Assessment:

Conduct surveys and interviews with NGOs and potential donors to understand key challenges in the charitable sector, including fund transparency, donor engagement, and resource allocation. Analyze existing donation platforms to identify shortcomings and gather insights on desired improvements, such as ease of use, real-time impact tracking, and secure transactions.

2. Requirement Definition:
Create a list of essential features based on the needs assessment. Prioritize functionalities such as verified NGO listings, multiple donation options (monetary, material, volunteer work), real-time fund tracking, and donor impact reports.

3. Platform Design:
Design an intuitive and user-friendly interface for both donors and NGOs, ensuring seamless navigation, quick donation processing, and transparency. Integrate features like secure payment gateways, automated NGO verification, real-time donation tracking, and cause-based categorization to enhance the overall experience.

4. Development:
Utilize scalable cloud-based infrastructure for smooth operations and data security. Implement secure authentication (OAuth, Aadhaar-based verification), AI-driven NGO recommendations for donors, and automated fund disbursement tracking. Ensure seamless integration with third-party services such as payment gateways (RazorPay, UPI), SMS/email notifications, and compliance verification systems.

5. Testing:
Conduct extensive usability testing with a sample group of NGOs and donors to refine the platform. Address potential issues related to fund allocation, payment processing, and data security. Optimize performance for high-traffic scenarios, mobile accessibility, and multilingual support.

6. Deployment:
Roll out DaanSetu in a phased manner, starting with verified NGOs and early adopters. Ensure clear communication of platform features and benefits through digital campaigns, workshops, and NGO onboarding programs. Establish a real-time support system for queries and troubleshooting.

7. Updating and Maintenance:
Set up a continuous monitoring and feedback loop to enhance platform performance. Regularly introduce new features such as AI-powered donation recommendations, blockchain-based transparency reports, and impact analytics dashboards to improve user engagement and trust. Ensure timely bug fixes, security patches, and compliance updates.

8. CONTRIBUTION AND FINDINGS

The DaanSetu project aims to provide a centralized, transparent, and user-friendly platform that bridges the gap between NGOs and donors, ensuring that charitable contributions reach the right causes effectively. By leveraging digital innovation, real-time tracking, and secure transactions, DaanSetu serves as a model for modernizing philanthropy, fostering greater collaboration and trust in the charitable sector. This initiative underscores the importance of efficiency, accessibility, and impact-driven giving, empowering both donors and NGOs to drive meaningful change. The crowdsourcing concept is used to attract the compassion of volunteers to tap into freelance expertise, connecting the changemakers, freelancers, and NGOs for Social projects.

9. CONCLUSION

The DaanSetu project aims to provide a streamlined, transparent, and user-friendly platform for connecting donors and NGOs, enhancing the efficiency of charitable contributions while promoting social impact. By leveraging digital technology, secure transactions, and real-time tracking, DaanSetu serves as a model for modern philanthropy, integrating innovative solutions with traditional charitable practices. This initiative

underscores the importance of accountability, accessibility, and trust in the donation ecosystem, ensuring that resources reach those who need them most.

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