



# IJRASET

International Journal For Research in  
Applied Science and Engineering Technology



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# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

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**Volume:** 13    **Issue:** IV    **Month of publication:** April 2025

**DOI:** <https://doi.org/10.22214/ijraset.2025.68465>

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# Nurturing Tomorrow's Smile's (EACH & EVERY LIFE IS IMPORTANT)

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**Abstract:** In the rapidly evolving technological landscape, societal contributions often take a backseat. *Smiling: Nurturing Tomorrow* is an Internet-based application designed to bridge this gap by facilitating donations and volunteer engagement for deprived children. The platform enables users to explore content, visualize donation data, and contribute to underfunded sectors. A machine learning (ML)-based model assigns tasks to volunteers based on skills and experience. The admin panel oversees children's data, adoption records, event planning, blog management, donation tracking, and certificate generation. Automated email notifications ensure secure transaction confirmations. Transparency is enhanced through real-time donation analytics and graphical representations. This system aims to streamline contributions, making philanthropy more accessible, effective, and impactful for a brighter future.

**Keywords:** NGO management, donation analytics, volunteer assignment, automation, transparency, child welfare, real-time tracking, social impact.

## I. INTRODUCTION

Non-Governmental Organizations (NGOs) play a vital role in addressing social challenges by providing education, healthcare, and essential resources to underprivileged children. However, the lack of automation in NGO management leads to inefficiencies in donation tracking, volunteer coordination, and event management. Manual processes often result in poor resource allocation, reduced transparency, and limited donor engagement, making it difficult to maximize social impact.

To overcome these challenges, we introduce *Smiling: Nurturing Tomorrow*, a Comprehensive NGO Management System that streamlines operations through automation, data-driven decision-making, and real-time analytics. This web-based platform integrates donor management, volunteer assignments, child adoption tracking, and event coordination into a unified system, ensuring efficiency and transparency.

The platform provides an interactive user interface where donors can contribute towards various causes and receive instant acknowledgments with detailed impact summaries. Volunteers are assigned tasks based on their skills and experience, with digital certificates awarded upon task completion. The admin panel centralizes child profile management, donation tracking, adoption requests, and event planning. Additionally, real-time donation analytics and visualization tools offer transparency into financial contributions and organizational performance.

By leveraging automation, role-based access, and data visualization, this system enhances resource optimization, user engagement, and operational efficiency, ultimately fostering a more effective and transparent ecosystem for child welfare.

## II. OBJECTIVES

### 1) Efficient Volunteer & User Management

- Enables smooth registration, tracking, and coordination of volunteers.
- Allow admin to manage user roles and track participation.

### 2) Automated Certificate Generation & Email Notifications

- Generate certificates for volunteers and donors automatically.
- Send certificates via email to ensure seamless delivery.

### 3) Smart Donation Management & Tracking

- Allow users to donate money, toys, food, and clothes.
- Admins notify donors and collectors about donation status (accepted, pending, etc.).
- Ensure fair distribution of donations based on needs.

4) *Adoption Management*

- Maintain a secure and transparent adoption tracking system.
- Admins can verify and approve adoption requests.

5) *Event Management*

- Allow NGOs to create and manage events.
- Send event reminders and update participants.

6) *Content Management System (CMS)*

- Enable NGOs to update blogs, stories, and impact reports.
- Improve user engagement through informative content.

7) *Donation Analysis & Graphical Insights*

- Provide a graph-based dashboard to track funding for different categories (toys, money, food, clothes, etc.).
- Identify areas with low donations and encourage users to contribute.

8) *Transparency & Impact Visualization*

- Allow donors to see how their contributions are utilized through real-time updates.
- Provide a map-based or graphical representation of donation impact.

9) *Secure & Scalable Architecture*

- Ensure data security for users, volunteers, and donations.
- Maintain a scalable infrastructure to handle high traffic and large datasets.

10) *Improved Engagement & Trust*

- Build a user-friendly platform that encourages more people to donate and volunteer.
- Enhance trust through real-time updates, receipts, and acknowledgments.

### III. LITERATURE SURVEY

Yusuf et al. (2017) presented an “Automated Batch Certificate Generation and Verification System” [1] to address the inefficiencies in certificate issuance, including the lack of admin control, manual email distribution, and complex template customization. The system only allows authorized administrators to issue certificates, thus increasing security. It also automates the delivery of emails, eliminating delays, and replaces XML-based configurations with a user-friendly interface, making customization accessible. These improvements enhance efficiency, security, and usability in certificate management.

Pathak et al. (2018) proposed “Ek Ka Josh - a cloud-based mobile application for NGOs”, allowing for easy contributions. However, the system has several limitations. It lacks detailed beneficiary data storage, meaning that the platform does not maintain comprehensive records of NGO beneficiaries, such as children and families receiving aid, making tracking and impact assessment difficult. It does not offer a certification feature, which prevents donors and volunteers from receiving official recognition for their contributions, potentially reducing engagement and motivation. The system also lacks parental data tracking, meaning there is no mechanism to monitor or maintain records of the parents or guardians of supported children, limiting the ability to assess long-term family well-being and support continuity. These limitations reduce transparency, accountability, and engagement between donors and NGOs.

Satti Lalitha Jyothi et al. (2023) introduced “Empowering Volunteers and NGOs, a digital connection hub” [3], a web-based platform designed to enhance volunteer engagement with NGOs. The platform facilitates seamless volunteer registration, event announcements, and real-time tracking using GPS technology. However, it lacks comprehensive donor and beneficiary data storage, an automated volunteer assignment system, and an integrated feedback mechanism for performance evaluation.

Berezko and Zhezhnych (2017) highlighted a key limitation in their paper, “Rethinking the NGO Website from the Knowledge Management Perspective” [4], where the proposed system lacked real-time donation tracking. This absence of live updates on donation distribution led to a lack of transparency, leaving donors uncertain about how their contributions were being allocated.

DeSilva et al. (2023) launched a “Donation Management System” [5] that would manage connecting donors and recipients through a centralized, trustworthy platform. The system emphasizes a study of government schools in Sri Lanka, carrying out surveys to ascertain needs, and enabling safe interactions between donors and donees. However, the study shows limitations in the management of the donors, which include the inability to track donor engagement history and lack of transparency in donation data such as absence of images of donors, their phone numbers or emails for verification.

Korkmaz et al. (2019) introduced a "Sustainable Member Motivation System Proposal for NGOs: NGO-TR" [6], a blockchain and gamification-based system aimed at increasing volunteer engagement. The platform allows NGOs to track volunteer activities, manage decentralized identities, and establish a reputation system. However, it lacks comprehensive beneficiary data storage, an automated volunteer assignment mechanism, and structured feedback for performance assessment.

#### IV. SYSTEM ARCHITECTURE

##### A. Uml Diagram

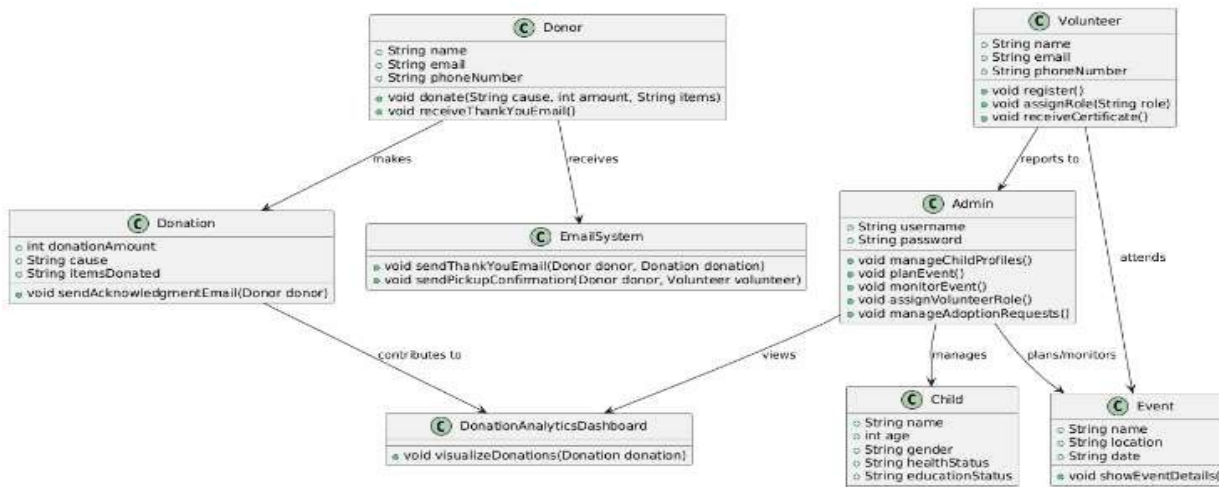


Fig1 Working of system

This class diagram represents a donation management system, where donors contribute money or items, and volunteers assist with donation pickups. Admins oversee donations, manage scheduling, and track donation trends through the analytics dashboard. The email system handles communication, including thank-you emails and pickup confirmations. Children benefit from the donations and attend organized events. The system ensures efficient donation processing, tracking, and beneficiary support.

##### B. System Architecture

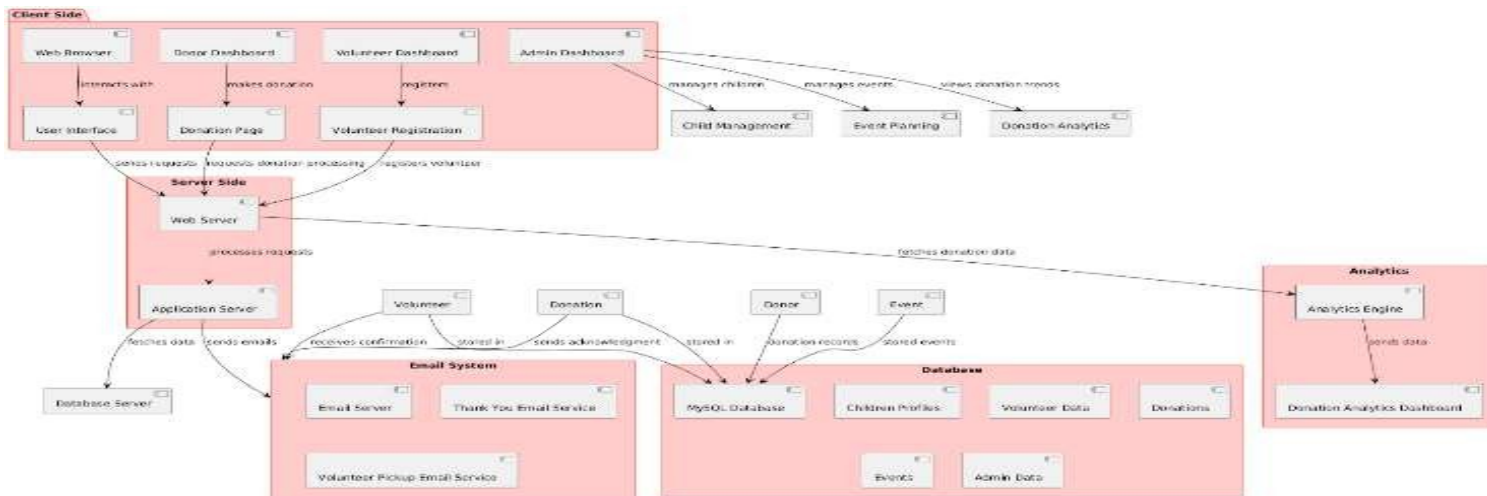


Fig2 High-level design and organization of system

The architecture diagram illustrates the interaction between different components across client, server, database, email, and analytics layers. The client-side includes web-based dashboards for donors, volunteers, and administrators, facilitating donation tracking, volunteer registration, and system management. The server side processes donation transactions, verifies volunteers, and handles communication through an application server and a web server.

The database layer, built on MySQL, stores structured data, including donor details, volunteer information, and donation records. The email system automates notifications, such as thank-you emails for donors and pickup requests for volunteers. The analytics engine processes donation data, providing insights via the donation analytics dashboard. This architecture ensures efficient donation processing, volunteer coordination, and data-driven decision-making, enhancing transparency and impact in the donation lifecycle.

C. Flow Diagram

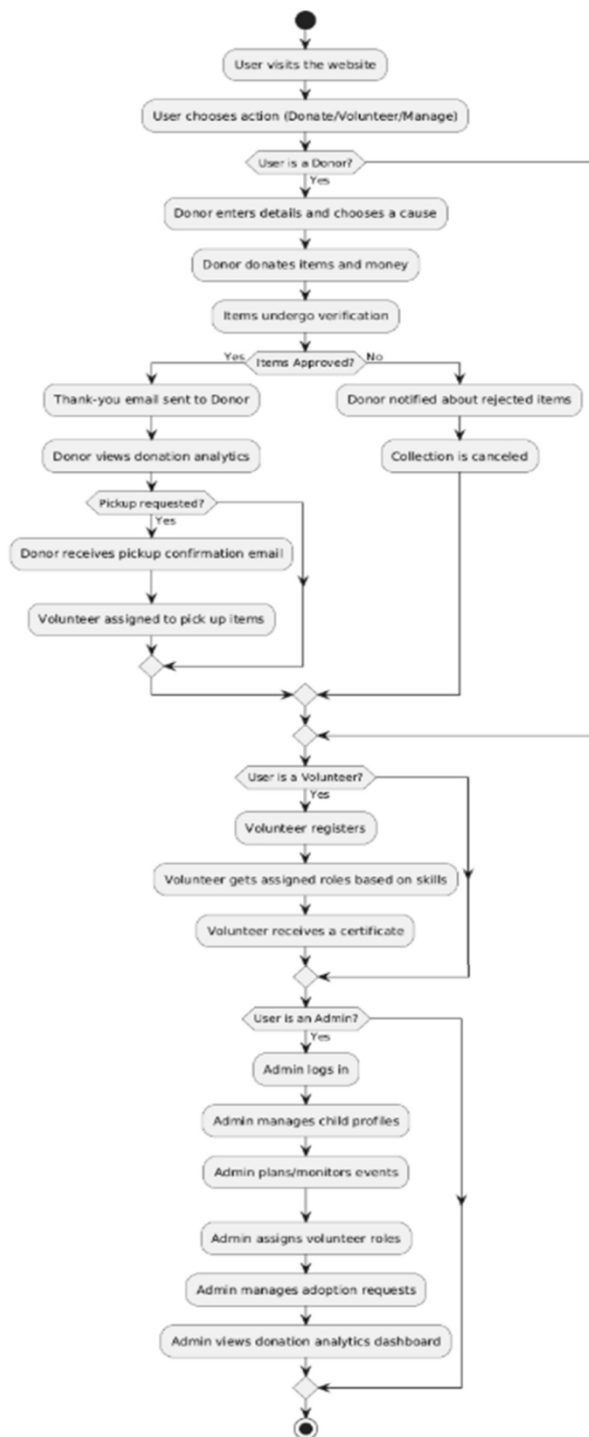


Fig3 step-by-step process of a system functions

The system streamlines the process by ensuring donated items are verified before distribution. Users can donate, volunteer, or manage operations. Donors provide details, donate money or items, and undergo a verification step to check item usability. If approved, a thank-you email is sent, and pickup is arranged; otherwise, the donor is notified, and collection is canceled. Volunteers register, get assigned roles based on skills, and receive certificates upon completion. Admins manage child profiles, monitor events, assign volunteers, handle adoption requests, and analyze donation data. This structured workflow optimizes resource allocation, ensuring only usable donations reach beneficiaries efficiently.

## V. RESULTS ADMIN DASHBOARD

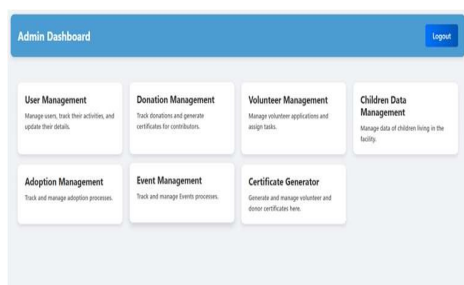


Fig 7.1 Dashboard

This image represents an Admin Dashboard for an NGO management system. The dashboard provides administrators with various management functionalities like User Management, Donation Management, Children Management, Adoption Management, and Certificate Generator to oversee and control different aspects of the organization.

ID	NAME	EMAIL	PHONE	ROLE	STATUS	IMAGE	ACTIONS
*a258c6886972a785726b	Akai Sahu	2021.sejal.maurya@gmail.com	8169413581	Collector	Inactive		<a href="#">Edit</a> <a href="#">Delete</a>
7a759903b3c91378902c06d	Sariya Maurya	2021.sejal.maurya@gmail.com	8169413581	User	Inactive		<a href="#">Edit</a> <a href="#">Delete</a>
7a759943b3c91378902c109	Pris Sharma	am@gmail.com	09876543212	User	Active		<a href="#">Edit</a> <a href="#">Delete</a>
7a75a343b3c91378902c115	Sargam Rageshkumar Maurya	2021.sejal.maurya@gmail.com	8169413581	Volunteer	Active		<a href="#">Edit</a> <a href="#">Delete</a>

Fig 7.2 User Management

This User Management Dashboard allows admins to manage users by viewing their details (ID, name, email, phone, role, status, and image). Admins can edit, delete, or add new users using the provided buttons, ensuring efficient user control.

User	Email	Phone	Item	Category	Quantity	Status	Collector	Actions
Amita Maurya	2021.sejal.maurya@gmail.com	807564612	Fresh Mango Juice	Clothes	1	Collector Assigned	Akai Sahu 8169413581	<a href="#">Mark as Collected</a>
Iritika Maurya	2021.sejal.maurya@gmail.com	8169413581	Rice/Kg	Food	1	Collector Assigned	Not Assigned	<a href="#">Mark as Collected</a>
Paini Maurya	2021.sejal.maurya@gmail.com	8169413581	toys	toys	1	Completed	Akai Sahu 8169413581	<a href="#">Completed</a>

Fig 7.3 Donation Management

This Donation Management Dashboard tracks donation details, including donor info, item category, quantity, status, and assigned collector. Admins can mark donations as collected or check completed ones for efficient management.

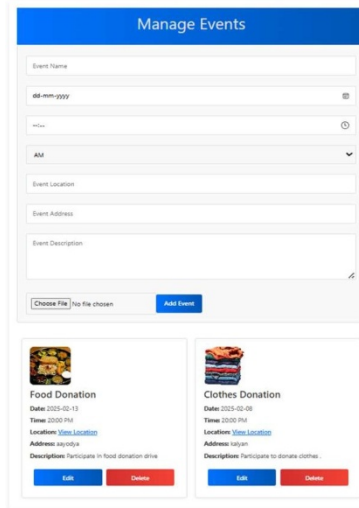
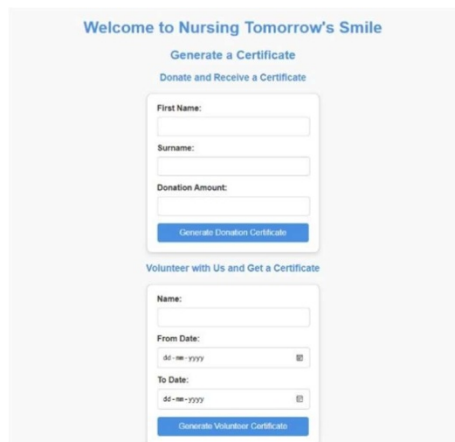


Fig7.4ManagementEventsDashboard

This Manage Events Dashboard allows admins to create, edit, and delete events by entering details like name, date, time, location, and description. Below, listed events such as Food Donation and Clothes Donation can be modified or removed.

### A. Certificate Generator



### B. Users

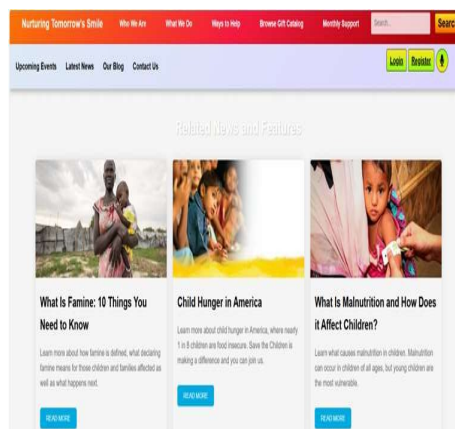


Fig7.6UserDashboard

This News & Features section of the Nursing Tomorrow's Smile website highlights important topics like famine, child hunger, and malnutrition. It provides informative articles and resources to raise awareness and encourage support for children in need.

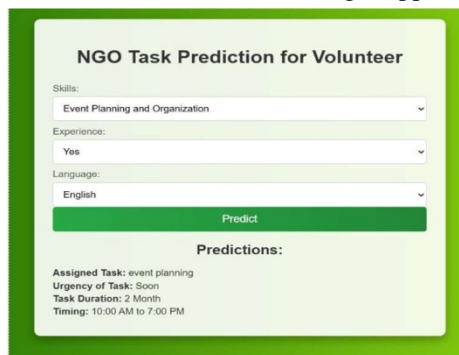


Fig 7.7 Task Prediction for Volunteer

This NGO Task Prediction for Volunteer system suggests tasks based on a volunteer's skills, experience, and language. After selecting the inputs, it predicts an assigned task, urgency, duration, and timing, helping volunteers find suitable roles efficiently.

## VI. CONCLUSION

Our NGO website aims to create a dynamic platform dedicated to supporting children through various initiatives. Our website will effectively facilitate and streamline efforts to aid children in need, making a tangible difference in their lives. We are committed to empowering individuals and communities to contribute meaningfully. Our goal is to foster a supportive network that amplifies our impact and ensures every child receives the care and opportunities they deserve.



This Certificate Generator enables users to receive certificates for their donations and volunteer contributions by entering their details and relevant dates. It provides an easy way to acknowledge and appreciate their efforts.

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