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OrphanAssist: A Platform for Safeguarding Children

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Abstract: India is the 2nd largest populated country in the world, with around 1.35 billion people living. About 158.8 million of the population are children below the age of 6. Out of these children, we have 30 million which sums up to a overall portion of the youth population. Among these 30 million children,we have only 370,000 of them who are in orphanages Now since the Covid-19 has hit us in 2020, more than thousands children have lost their parents and has left orphaned. To solve this problem, we have come up with our website named OrphanAssist, where people who wants to help a orphan with a safe home can make a good use of of our website. This system will not only invest in the process of giving shelter to the orphans but also enhances their life by donating food, clothes and money if needed. In our website, we will have a option of camera , where a person will upload a photo of a orphan he wants to help with and with that photo a location link will be sent to registered orphanage so that they can reach out to the orphan for the help they need. And to motivate people to contribute more to help orphans we have added reward system where when a person completes certain amount of help he will be rewarded with some points and at the end he will receive a certificate of social service.Also we are adding a chatbot in our website to make easier for the visitors to search for orphanages they want.

Keywords: *Orphans, Shelter, Chatbot, Donation.*

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I. INTRODUCTION

OrphanAssist is a transformative platform designed to address the urgent needs of orphaned and underprivileged children in India by connecting compassionate individuals and organizations with children in critical need. With millions of children unable to access the safety and care of orphanages, OrphanAssist bridges this gap by offering a streamlined, accessible way for users to contribute meaningfully. The platform allows users to provide donations in the form of money, food, clothing, or even shelter, ensuring that assistance reaches children where it is most needed. By incorporating technology, OrphanAssist empowers its users to upload images of orphaned children, accompanied by location details, enabling registered orphanages and social service organizations to locate and provide help to these vulnerable children effectively.

To encourage broader participation, OrphanAssist features a reward system that recognizes contributors with points and social service certificates, fostering a sense of accomplishment and accountability. This gamified approach not only motivates more people to contribute but also helps build a network of consistent support for children in need. By combining human compassion with technology and incentives, OrphanAssist is creating a scalable and impactful solution to improve the lives of countless orphaned children, ensuring they have a brighter, more secure future.

- *Unique Aspects and Contributions:*

OrphanAssist introduces innovative solutions to address orphan care challenges in India. The platform uses a photo-based identification system, enabling users to upload an image of an orphan, tagged with location data, which is shared with the nearest connected NGO or orphanage for timely support. Donors can track their contributions and see the impact directly. seamless coordination between donors, orphanages, and volunteers.

- *Innovations and Applications*

OrphanAssist introduces a range of technological and functional innovations to improve orphan care. The platform uses a photo-based identification system combined with geolocation to instantly connect orphaned children with the nearest NGOs or orphanages. A reward system incentivizes community engagement, encouraging more people to contribute actively.It helps NGOs and orphanages efficiently locate and assist vulnerable children through location-based

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services. The platform enables donors to make targeted contributions, such as food, clothing, or monetary support, based on specific needs.

➢ *Significance:*

The significance of the OrphanAssist project lies in its ability to address the growing challenges faced by orphaned children in India, particularly in the wake of the COVID-19 pandemic. By providing a platform that directly connects donors, orphanages, and NGOs, the project ensures timely intervention and care for vulnerable children.The project promotes social awareness and engagement by encouraging community involvement through a reward-based system and adoption support. It not only reduces inefficiencies in resource distribution but also minimizes wastage by enabling targeted donations.

II. LITERATURE REVIEW

Research papers were surveyed in order to compile a literature review. Our ability to design a better system will be aided by the constraints and information learned from the publications. It also briefly explains the shortcomings of the current work and the ways in which our concepts are superior to the current ones.

- The methodology employed in this study is pivotal in achieving the stated objectives. This paper presents initiative or organization that focuses on providing care and support to orphans and highlights the problem of orphans and their need for care, protection and opportunities. This system will be at a centralized thing so that it is available to all the people who wants to adopt. The system will make sure the adoption procedure which will be faster and more responsive in real life.

- This paper presents an Android application that connects people with orphanages, allowing them to donate food, clothing, or money online. Users can also browse profiles of children available for adoption, select a child, and complete the adoption process by visiting the orphanage. This system basically focuses on the adoption system. This paper gives a insight into making user and chidren profile.

- Furthermore, this paper introduces a web application for adoption agencies, facilitating donations of money and materials by allowing users to view specific needs and make contributions online. It uses Haar wavelet equations to efficiently connect donors with nearby schools, reducing manual effort, and includes features like online payments and search filters for targeted charity selection. Here, Haar wavelet equations is equation which gives you the nearest orphanages to reach out to.

- The House of Hope Orphanage will be able to create a stand-alone system for managing and tracking its orphans records thanks to the suggested system. With MySQL, Microsoft.NET, Visual Basic.NET, OLEDB adapter, and Visual Basic.NET, it guarantees correct and easily accessible records for child adoption and admittance. The system digitizes and streamlines orphanage administration systems and processes.

- The paper also presents an Android application where it is connecting users with orphanages, enabling online donations and facilitating the adoption process. Users can donate food, clothing, or money, or browse child profiles for adoption directly using app.

- The online charity connecting system allows users to register, access orphanage details, and make donations. It also includes an adoption option with an eligibility checker, providing a streamlined process for those interested in adopting a child from an orphanage.

- This is a location based orphanage finding system this Paper presents Android-based application aimed at reducing food and clothing waste in India by connecting donors in orphanages, old age homes. The system aims to address the issues of food and clothing waste, while also providing data about the impact of donation made.

- The feasibility assessment for a scheme to assist orphanages in streamlining their donation and communication procedures is covered in this paper. The research evaluates the project's technical, operational, and financial side of viability while taking the organization's technical resources into account and make it more advance.

The project's objectives are to maintain information, improve donor communication, and broaden the scope of gifts in addition to increasing participation.

III. METHODOLOGY

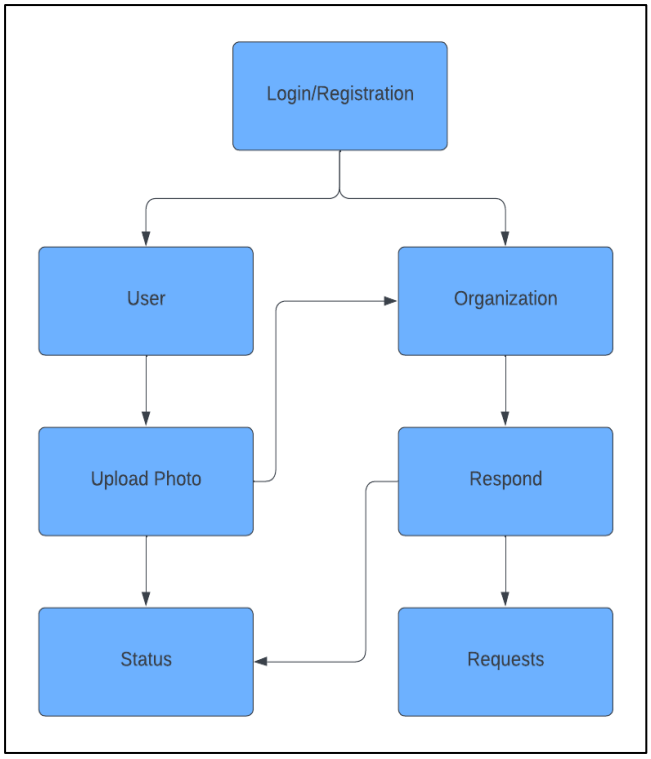

Fig 1 Work Flow of Website

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The methodology begins with a Login/Registration process for both users and organizations. A user can upload a photograph, which is then sent to an organization. The organization reviews and responds to the request. Responses are sent back to the user, with the Status updated to reflect the request's current status. An organization can handle multiple user Requests and ensure that communication is handled in an efficient manner. The process ensures seamless interaction between users and organizations, providing a structured workflow from data submission to status tracking.

A. Technology used:

➢ *HTML :*

This is the computer language used in frontend development. It will define the content and structure of website we are developing.

➢ *CSS:*

It is the style sheet language which we will use to style our interface of the website. It will be used alongside HTML and Javascript.

➢ *Javascript:*

A JavaScript is a programming language and core technology of the Website development, alongside HTML and CSS. Many of the websites made use JavaScript on the client side for webpage behavior.

➢ *MySQL:*

MySQL is an open-source relational database management system used to store, manage, and retrieve data efficiently for applications.

➢ *Node.js:*

It is a language utilized for server-side programming and is generally implemented for non-blocking, event-driven servers, including conventional websites and back-end API services.

- Needs Assessments: - To create a framework for the OrphanAssist website, our team held discussions with a guide and organisation and properly examined the collected requirements to ensure project integrity.

- Technology Stack: - The MERN stack[2] was selected because of its suitability for building dynamic, scalable, and real-time online applications. It comprises, Sql, EJS, and Node.js.

- Design and Structure: - Developed both the frontend and backend components of OrphanAssist's website. Specified the frontend elements, API endpoints, and database schema to provide necessary features and functionalities.

- Development Process: - Using an incremental and iterative development methodology, the project was divided into smaller components and completed. Git and GitHub were used for collaboration through version control.

- MVC methodology: - To ensure flexibility and adaptability during the development process, we adopted the MVC (Models, Views, and Controllers) development approach. Breaking the code down into components was a crucial aspect of this methodology. The MVC structure facilitates the organization of the codebase clearly and concisely, allowing any developer to easily understand the codebase and work on it without any complications.

- Testing: - We followed a testing-first approach to save time and ensure smooth development. We tested backend APIs with Postman and Hopscotch for the proper functioning of all routes.

- Continuous integration and deployment: - GitHub was used to ensure code quality and optimize development. Branches were created for collaborative development.

- Prototyping and user feedback: - We launched a prototype for testing purposes which was distributed among administrators, faculty and students. This allowed us to gather input for our front-end development and to get ideas about user interface and experience. To meet user expectations, we collected feedback and progressively improved the features and functionalities based on user input.

- Documentation and Knowledge Transfer: - To ensure efficient use of the technology, thorough user manuals and guidelines were provided to administrators, teachers, and students. All of these resources, including the user manual, are available on our GitHub repository.

- Deployment and Maintenance: - The OrphanAssist website was deployed to a production environment using a cloud platform like Heroku. After deployment, logging and monitoring systems were established to ensure the program's functionality and address any issues that may arise. The website's maintenance and support were taken care of, and any necessary improvements, upgrades, and bug fixes were implemented to ensure its smooth operation.

IV. RESULTS

Among the noteworthy results of this project is a straightforward and user-friendly user interface. Transactions may be completed quickly and easily with the Ethereum wallet.

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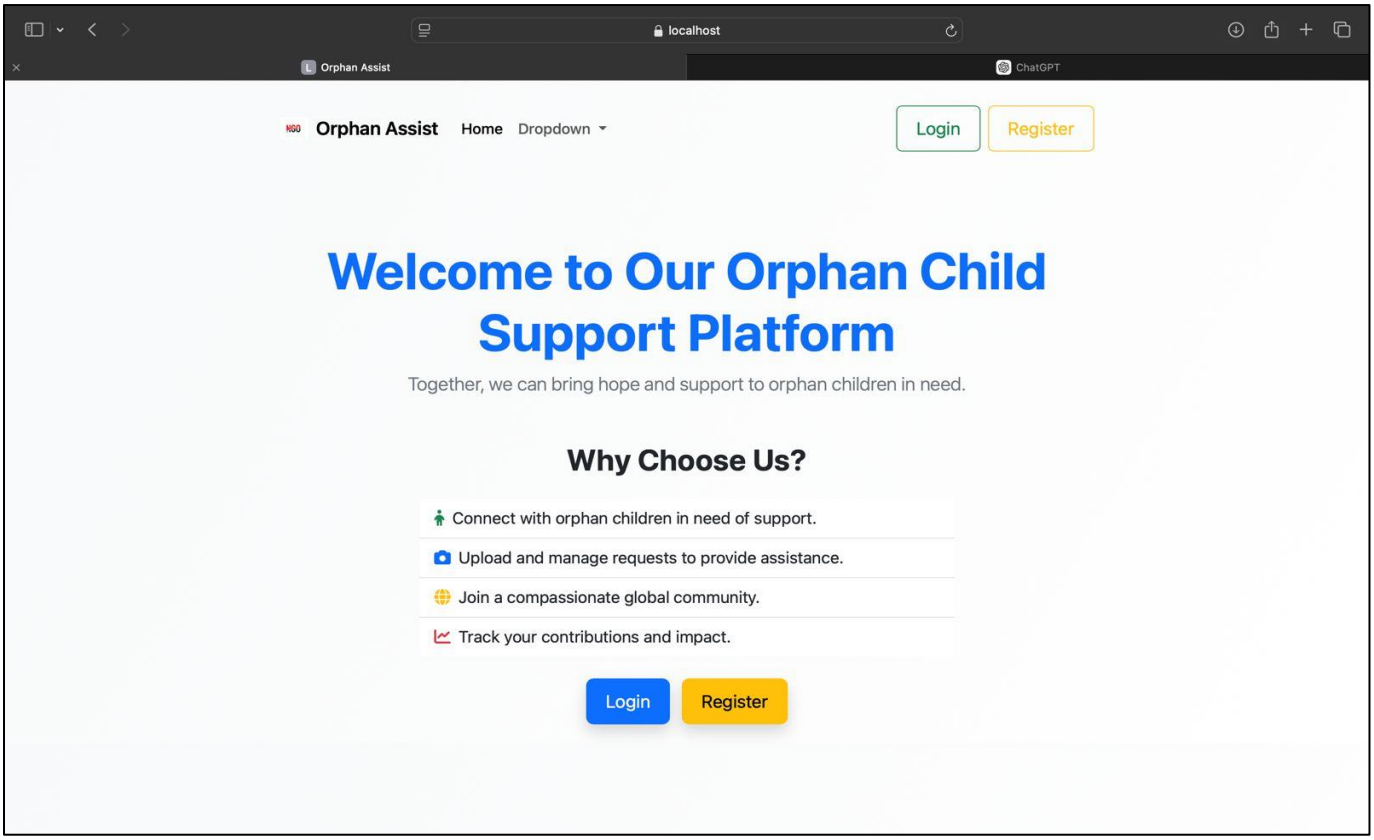

Fig 2 Home Page

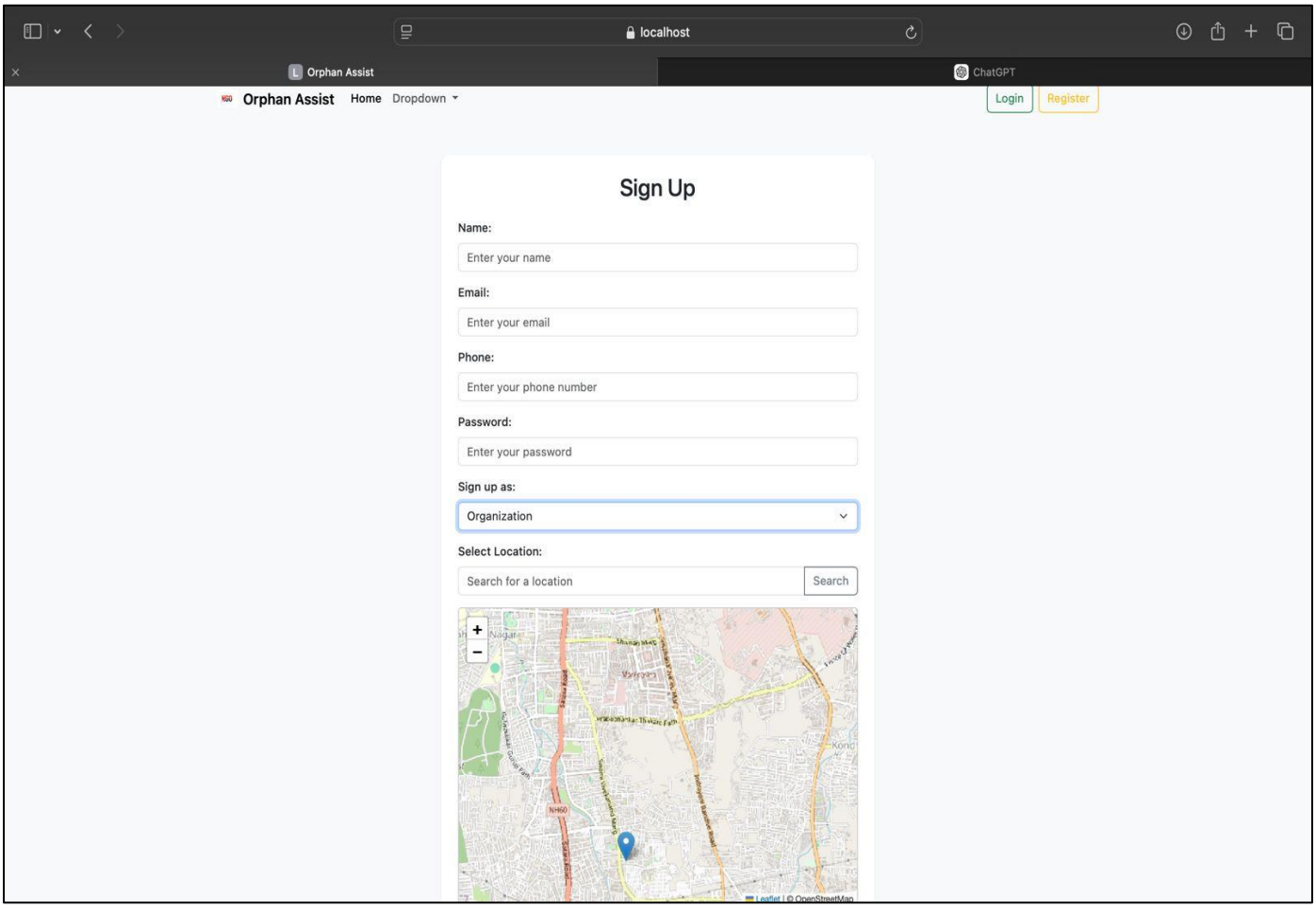

Fig 3 Login Page (User/Organization)

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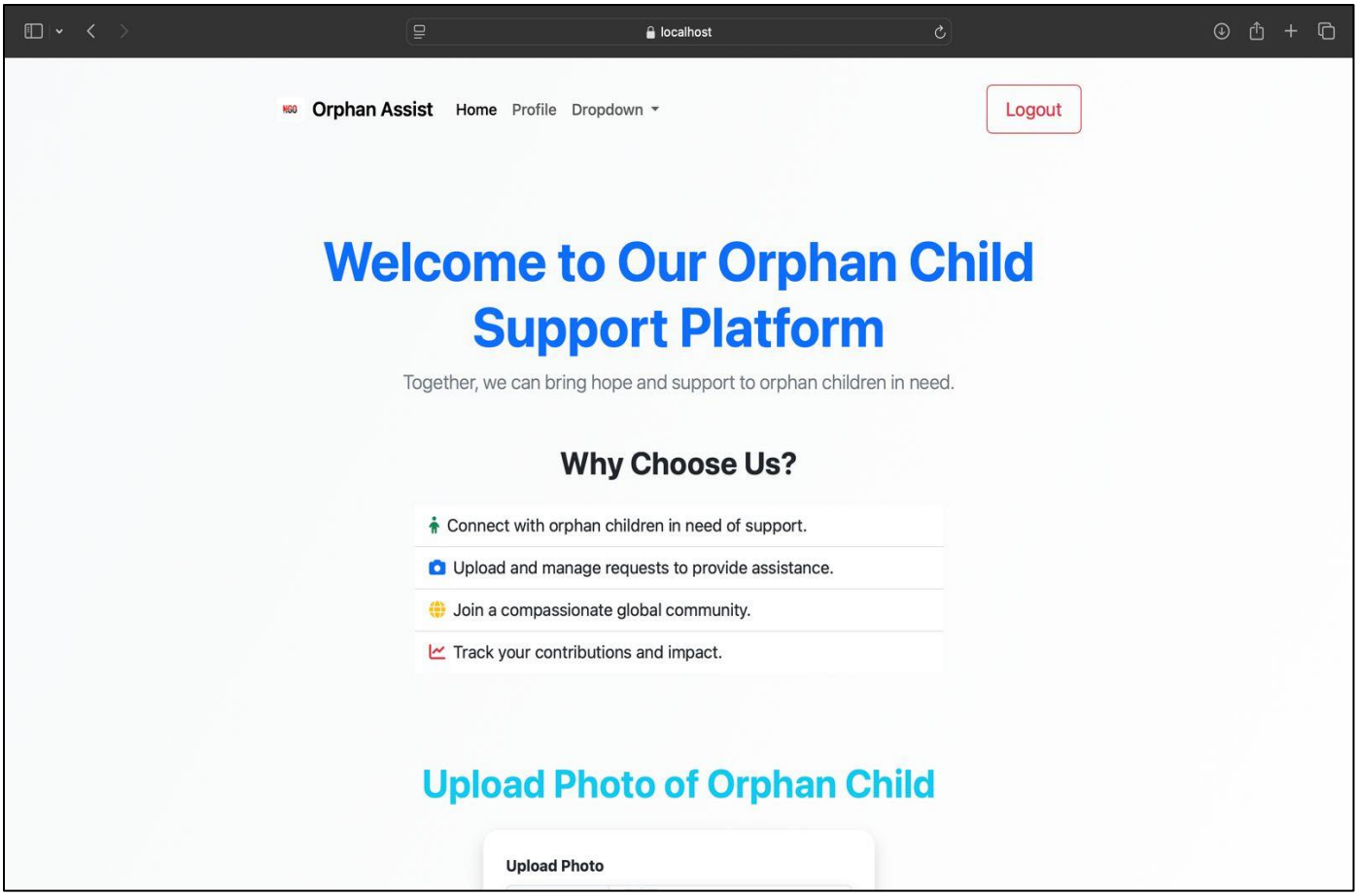

Fig 4 User Page

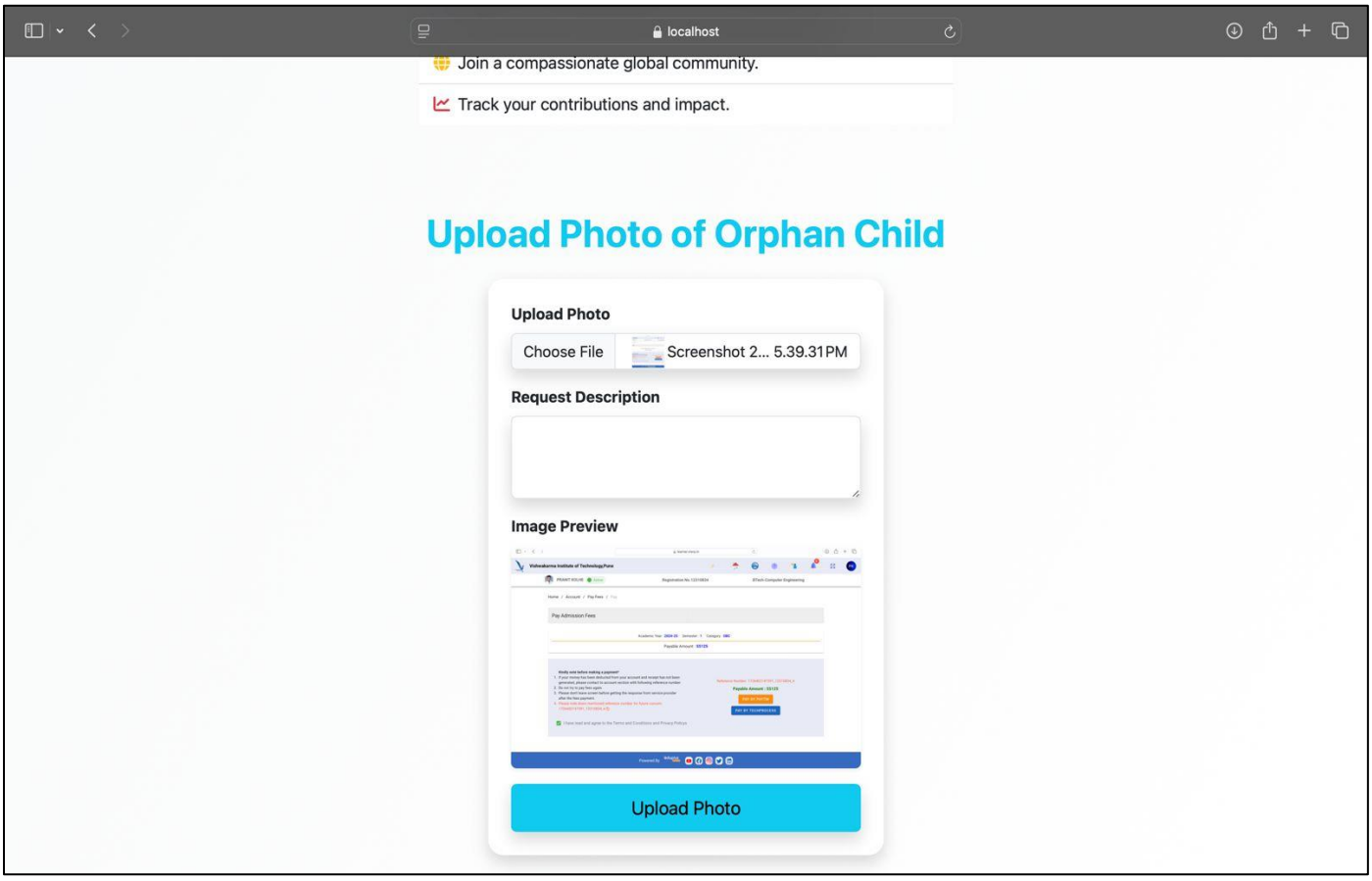

Fig 4 Photo Uploading

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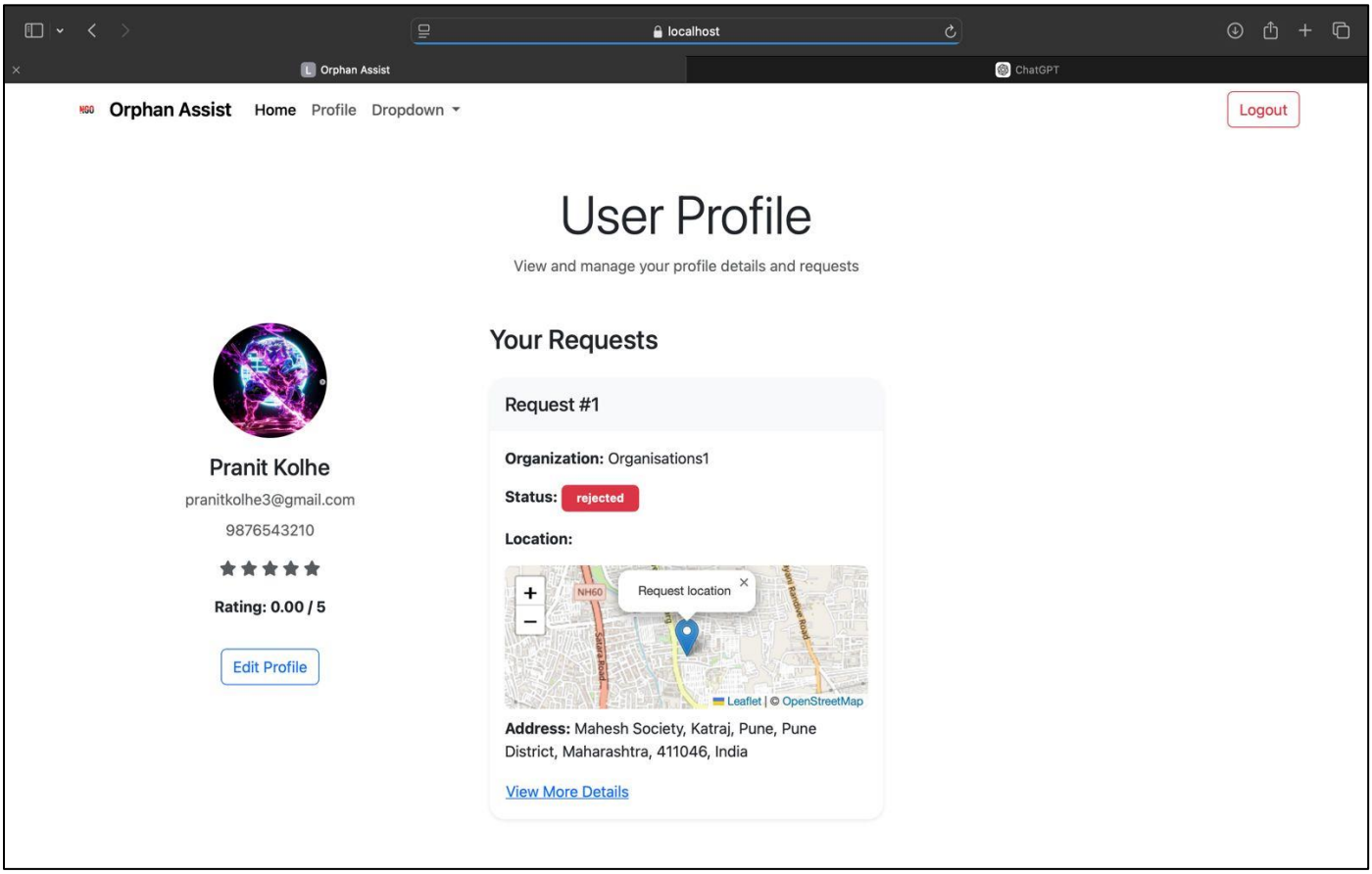

Fig 5 User Profile

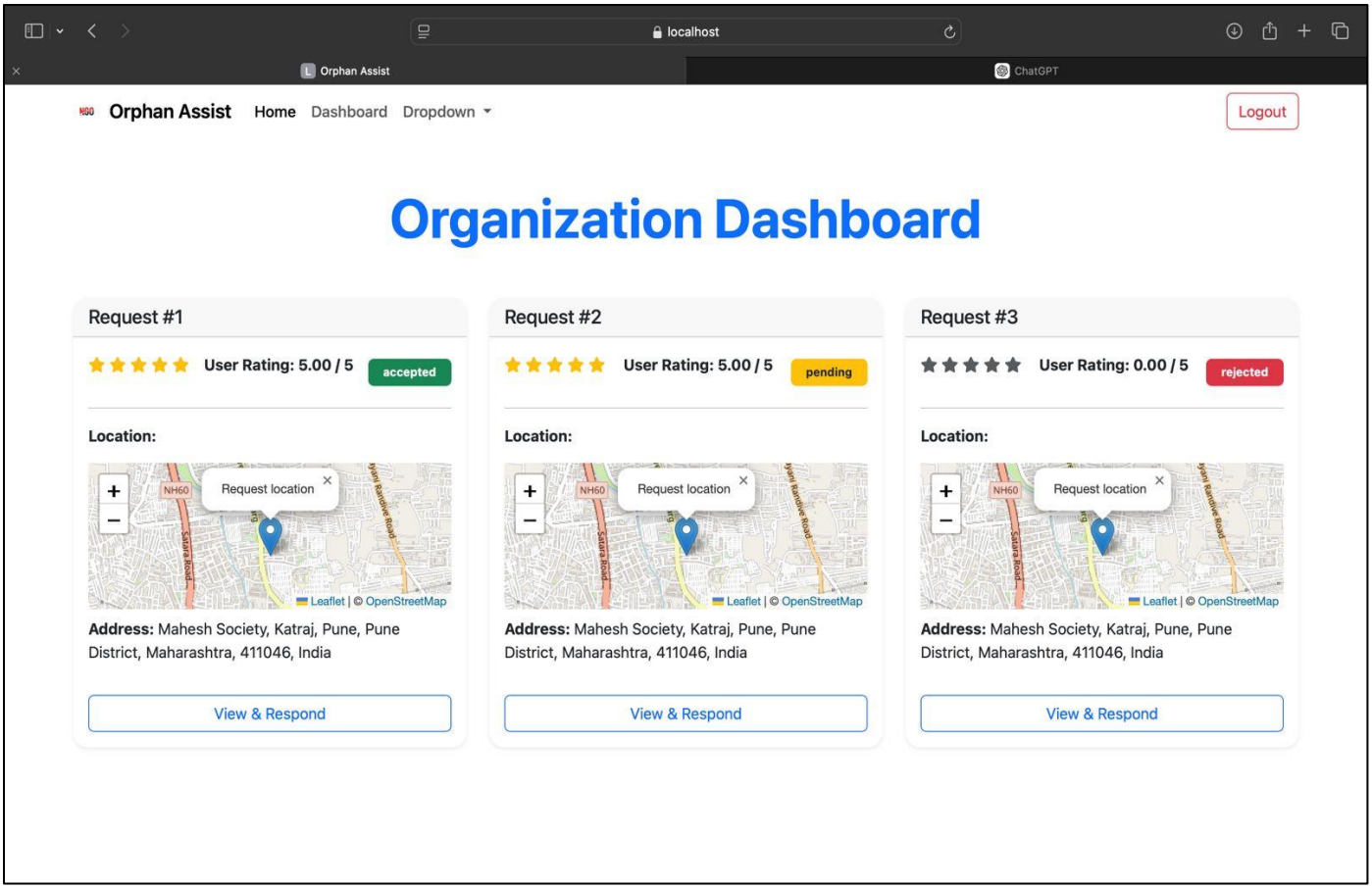

Fig 6 Organization Dashboard

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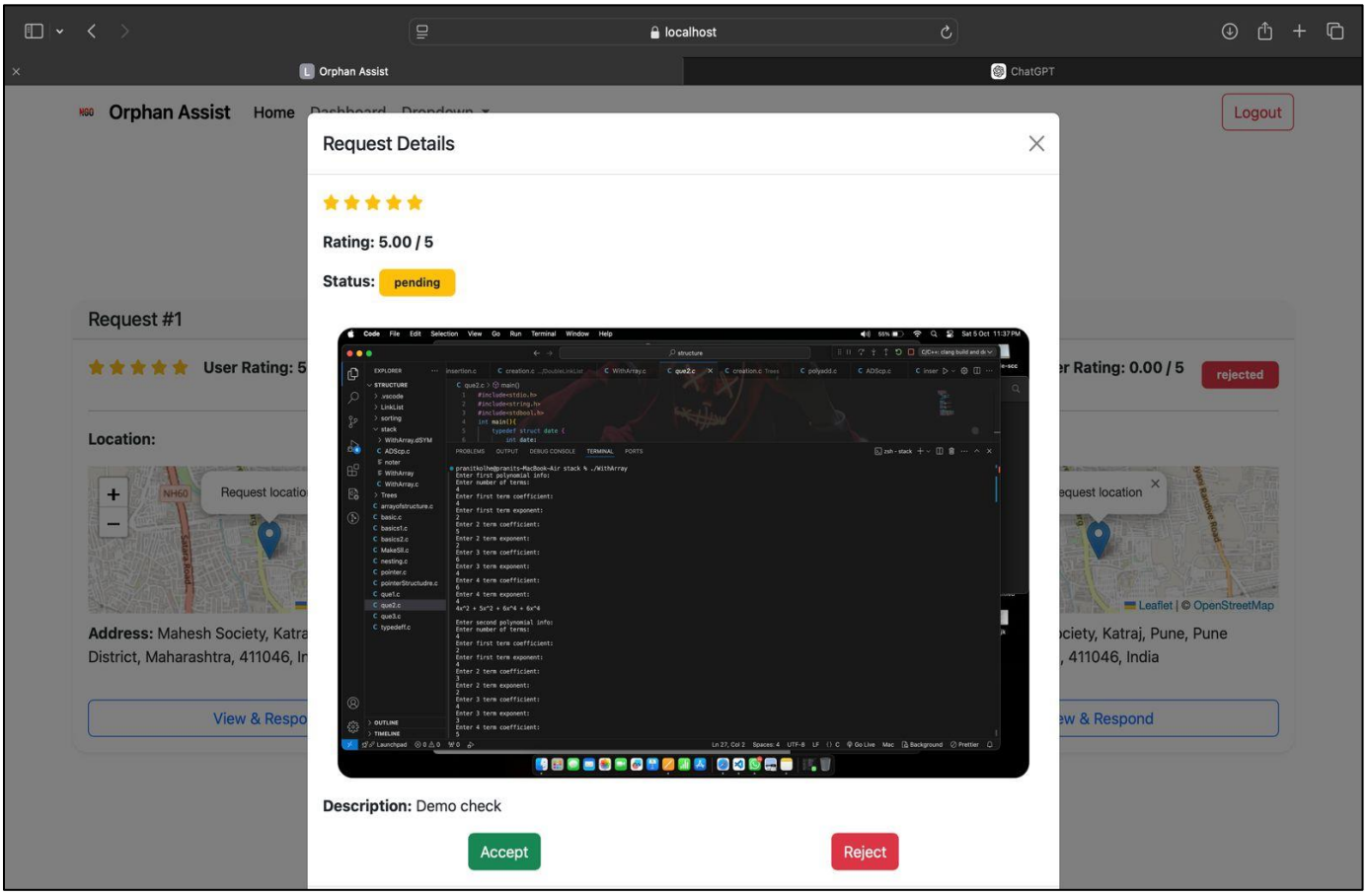

Fig 7 Request Page on Organization

V. FUTURE SCOPE

- We can think of adding a AI Chatbot where if any user searches of a organization he/she has to reach out, he can research for it.
- We had now made a website , this website can also have a APP Development, for more user interaction and for using this project easily.
- We are expecting to meet all the specified expectations through organization point of view and add it to website, so that organizations as well as users can easily solve their problems.
- We can form a volunteers group for a social welfare, where they will use this website to directly locate the children found on road to orphanages or for spreading awareness about the website.

VI. CONCLUSION

OrphanAssist is a transformative initiative designed to protect and uplift orphaned and street children by ensuring their right to education and safety.

Through robust community collaboration, innovative technology, and dedicated resources, the project aims to break the cycle of vulnerability and empower these children for a brighter future.

By fostering a network of support involving NGOs, orphanages, and local communities, OrphanAssist not only addresses immediate needs but also lays the groundwork for lasting societal change, contributing to a more compassionate and proactive world.

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