FOODFORWARD-AN INITIATIVE TO REDUCE FOOD WASTAGE

[1] R.V.N.Vijayanand, [2]D. Manideep, [3]B. Mohari, [4] D.Pramod, [5]K. Spandana Kumari

B. tech student,   B.tech student,   B.tech student,   B.tech student,   Assistant Professor
DEPARTMENT OF CSE
VIDYA JYOTHI INSTITUTE OF TECHNOLOGY, AZIZ NAGAR, HYDERABAD.

Abstract: FoodForward presents an innovative web platform linking surplus food suppliers, such as restaurants and event organizers, with individuals facing food insecurity. Developed with HTML, CSS, Javascript, Node.js, and MySQL, the platform offers a user-friendly interface streamlining processes for food suppliers. Suppliers can register, input surplus food details, and schedule pickups, while charitable organizations, serving as recipients, coordinate distributions.

With a mission to foster community engagement, FoodForward leverages technology to effectively combat food waste and hunger. By facilitating the streamlined redistribution of surplus food, the project embodies principles of social responsibility and community support, encapsulated in its motto of "Share a bite, Change a Life." Through its innovative approach, FoodForward aims to make a significant impact in addressing food insecurity, harnessing the power of technology to create meaningful change in communities.

Keywords –Food wastage, Web Development, HTML, CSS, JavaScript.

I. INTRODUCTION

Food waste is a significant global challenge that poses ethical, environmental, and economic concerns. In many countries, a staggering amount of edible food is discarded at various stages of the supply chain, leading to inefficiencies and contributing to issues such as hunger and environmental degradation. Approximately 25% of the available food supply is wasted, highlighting the urgent need for effective solutions to address this pressing issue. To combat this problem, innovative approaches are essential, one of which involves establishing a platform that connects restaurants with NGOs to redistribute surplus food to those in need.

The proposed platform aims to create a seamless bridge between food providers, particularly restaurants, and charitable organizations, such as NGOs. By leveraging technology and online networks, this platform seeks to streamline the process of matching surplus food with individuals and communities facing food insecurity. Through efficient coordination and collaboration, surplus food that would otherwise go to waste can be redirected to those who need it most, thereby mitigating food waste and alleviating hunger simultaneously. This initiative represents a holistic approach to addressing the intertwined challenges of food waste and food poverty, emphasizing the importance of collective action and social responsibility in creating a more sustainable and equitable food system.

By establishing a platform that facilitates the redistribution of surplus food, we can harness the power of collaboration and technology to tackle one of the most pressing issues of our time. This initiative not only offers a practical solution to reduce food waste but also underscores the critical role that businesses and charitable organizations play in fostering social and environmental well-being. Through efficient resource utilization and strategic partnerships, we can work towards a future where surplus food is seen as a valuable resource rather than a disposable commodity, and where no one goes hungry in the midst of plenty..

This paper aims to propose a solution to food waste by introducing a platform connecting restaurants with NGOs for surplus food redistribution. It highlights the urgency of addressing food waste's environmental and social impacts and demonstrates how technology and collaboration can mitigate waste, alleviate hunger, and promote sustainability.

II. SYSTEM ANALYSIS AND EXISTING SYSTEM

System analysis reveals the prevalent issue of food wastage across various stages of the market, where an estimated 25% of available edible food is discarded, contributing to environmental degradation and exacerbating food insecurity. Currently, there is a lack of efficient mechanisms to utilize surplus food from restaurants, resulting in large quantities being thrown away. This underscores the need for a

comprehensive solution to connect surplus food suppliers with charitable organizations. The existing system relies on ad-hoc arrangements, which are often inefficient and fail to address the scale of the problem.

III. PROPOSED SYSTEM

The proposed system seeks to address the inefficiencies of the existing system by introducing a centralized platform that seamlessly connects surplus food suppliers, such as restaurants, with charitable organizations, such as NGOs. This platform will serve as a digital marketplace where surplus food can be listed, and recipients can request pickups or deliveries. By streamlining the process of food redistribution, the proposed system aims to maximize the utilization of surplus food, reduce food wastage, and alleviate hunger in communities. Through registration and information exchange, both suppliers and recipients can efficiently coordinate food donations, fostering a collaborative approach to combatting food waste and food poverty. Additionally, the system will leverage internet matching to optimize the allocation of leftover foodstuff, ensuring that it reaches those in need in a timely and equitable manner. Overall, the proposed system represents a comprehensive solution to the challenges of food wastage and hunger, promoting sustainability and social responsibility.

IV. IMPLEMENTATION MODULE DESCRIPTION

The proposed system integrates key modules to streamline food redistribution and collaboration between surplus food suppliers and charities. Through the User Registration and Authentication module, stakeholders can securely access the platform. Food suppliers input surplus food details via the Surplus Food module, and charities request pickups using the Recipient Request module. These requests are optimized using a Matching Algorithm, while real-time communication is facilitated by the Notification module. Reporting and Analytics track key metrics, and Feedback and Rating ensure transparency. An Administrative Dashboard manages operations, fostering efficient food waste reduction and hunger alleviation efforts.

By seamlessly integrating these modules, the proposed system aims to create an accessible and user-friendly platform for efficient surplus food redistribution. Through collaboration and data-driven decision-making, it seeks to combat food waste and hunger effectively, promoting sustainability and social responsibility within communities.

V. RESULTS AND DISCUSSION

The implementation of the FoodForward web platform demonstrates a promising solution to the critical issues of food waste and food insecurity. By seamlessly connecting surplus food suppliers with individuals facing hunger, the system offers a practical approach to redistribute resources effectively and promote sustainability.

Fig 1: Donor registration

Fig 2: Donor Donation

Fig 3: Recipient Registration

Fig 4: Recipient Inbox

Fig 5: Recipient accepts food

VI. CONCLUSION

In conclusion, FoodForward represents a significant step towards addressing food waste and hunger in our communities. By harnessing technology and fostering collaboration between stakeholders, the platform embodies the principles of social responsibility and community support. Moving forward, continued monitoring and evaluation will be essential to assess the platform's impact and identify opportunities for further improvement. With a commitment to its mission of "Share a bite, Change a Life," FoodForward has the potential to make a meaningful difference in the fight against food insecurity while promoting a more sustainable future for all. and promote sustainable development.

VII. REFERENCES

[1] Vikram,Anirudh,Bhuvaneshwaran, Praveen kumar and Suganthkumar "A Survey on Food Waste Management System" 2021.

[2] Bagherzadeh M, Inamura M, Jeong H "Food waste along the food chain. OECD Food, Agriculture and Fisheries Papers" 2014.

[3] Davis C "Food recovery through donations as a response to food waste: A case study of two grocery stores participating in food recovery program in Boulder. University of Colorado, Boulder, CU Scholar" 2014.

[4] Nolan D "Research for possible establishment of a foodbank in Donegal" 2014

[5] Schneider F "Wasting food- An insistent behavior. Urbanissues and solutions, Shaw Conference Centre, Edmonton, Alberta, Canada".

[6] "Food wastage: Key facts and figures", Food and Agriculture Organization of the United Nations, 2020.

[7] Joris Tielens and Jeroen Candel, "Reducing food wastage improving food security?", Food & Business Knowledge Platform, 2014.