A Smart Food Donation System using Mobile Technology to Reduce Food Waste

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Abstract*: Food wastage is a significant global challenge, with approximately one third of food produced for human consumption, amounting to 1.3 billion tonnes, being lost or wasted according to the Food and Agriculture Organization (FAO) of the UN. In India, around 40% of food produced goes to waste, with sources such as weddings, events, restaurants, hostels, and households contributing substantially to this issue. Numerous non-profit organizations in India are actively working to combat hunger, malnutrition, and food wastage by collecting surplus food and distributing it to those in need. This proposed project aims to tackle urban excess food waste and hunger-related deaths by developing an innovative application designed to manage a cooked food supply chain. Using an ERP model, this application will facilitate the connection between surplus and deficient food resources within a community network. The system will empower administrators to oversee donor and recipient details, evaluate hotels based on their contributions and feedback, and coordinate logistics effectively. Trusts and recipients will have the ability to register, locate nearby food resources through a matching algorithm, select and request food, engage in direct communication with donors, and provide valuable feedback. Donors will be able to register, input available food details, respond to requests, and communicate with trusts and recipients. Furthermore, employees and delivery personnel will have the tools to register, manage pickups and deliveries, and provide timely notifications upon completion. This comprehensive approach aims to establish an efficient and transparent solution for the redistribution of surplus food resources, ultimately contributing to the reduction of food waste and alleviation of hunger in communities.*

Keywords: Mobile Application, Surplus Food, Food Shortages, Community Distribution, Food Insecurity

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