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Final Development Report Summary

The "WeAllocate" project is a resource allocation optimizer employing machine learning to improve the functioning of food banks, particularly at the IMAN Food and Wellness Center in Chicago. The project addresses challenges like unpredictable demand, potential wastage of perishable items, and the efficient utilization of available resources. This tool aims to optimize the distribution strategies of food banks, ensuring maximal reach and efficiency while minimizing resource wastage.

IMAN (Inner-City Muslim Action Network) operates the Food and Wellness Center in Chicago, offering essential food resources and wellness services to the community. This center faces challenges in resource allocation, demand prediction, and efficient distribution, all of which WeAllocate aims to address through predictive analytics.The WeAllocate application aims to bridge the gap between operational challenges and technological intervention, thereby enhancing IMAN’s efficiency and community impact.

It promises to provide predictive insights to optimize resource allocation and maximize impact, ensuring no individual in need is turned away.

Regular assessments will ensure the alignment of the WeAllocate system with IMAN's objectives, focusing on resource utilization, beneficiary outreach, feedback, operational efficiency, and inventory management. The WeAllocate application focuses on optimizing food resource allocation and distribution. It integrates into IMAN's existing workflow, connecting with systems like inventory management, beneficiary feedback portals, donor systems, and community event calendars. It is designed to operate on servers and workstations, and also features mobile interfaces for both Android and iOS platforms.

Technologically, WeAllocate is a cloud-based application, featuring a user-friendly dashboard with interactive data visualization capabilities. It incorporates role-based access controls and is designed with scalability in mind. The system will use tools like PostgreSQL or MySQL for database management, and services like AWS or GCP for hosting. Integrations with data analytics tools like Tableau or Power BI are also planned.The application is being developed keeping in mind the busy, crowded environment of food banks with varied tech proficiency among users. It considers multiple access points, noise levels, and potential connectivity issues. Key milestones include a pre-holiday season release, beta testing, and training sessions for staff and volunteers, targeting operational readiness before the winter season's demand spike. The project is funded by IMAN and potential grants, with development choices made to fit the budget.