

ABSTRACT

Our team has developed an intuitive food pantry management system that streamlines the guest check-in process, optimizes time management, and enhances data reporting. The app is built with Next.js, TypeScript, and Firebase to create a platform-independent progressive web application. PantryPilot functions on both mobile devices and desktop devices.

METHODS

Our team has worked closely with administrators from the Hugs & Hope Food Pantry during the design and implementation phases of this application. To create a user-friendly interface, PantryPilot uses components from the Material UI library in conjunction with the Next.js framework.

The application's backend relies on Firebase for authentication and data storage. Multiple volunteers working from the same facility will have in-sync data while managing the food pantry's operations.

RESULTS

We have successfully developed a tool that reduces labor involved in managing a nonprofit organization. At our test location, the Hugs & Hope Food Pantry, PantryPilot sped up the guest check in process by 78%. Additionally, it has eliminated manual report creation, a process that previously took three hours to do by hand.

We believe that this application has the ability to positively impact organizations outside of the Hugs and Hope Food Pantry. In the future, we plan to scale PantryPilot so that we can assist other charitable organizations with improving their workflow.

PantryPilot is a progressive web application created in support of a local nonprofit organization.

Developed with TypeScript, Next.js, Material UI, and implements Firebase for authentication and data storage.

Link to our website for additional information about the project.

