**Project Idea: PantryShare – Community Food Rescue Platform**

**Theme:** Social Good – Reduce food waste and feed those in need  
 **Target Audience:** High schoolers volunteering, school cafeterias, local food banks/shelters

## **🌟 Overview**

PantryShare is a web‑based platform that empowers schools, students, and community volunteers to rescue surplus food—track available shareable items, match them with nearby shelters or families in need, and coordinate volunteer pick‑ups in real time. By turning potential food waste into community nourishment, PantryShare tackles both hunger and sustainability.

## **⚙️ Core Features**

|  |  |  |
| --- | --- | --- |
| **Feature** | **What it Does** | **Why It Wins** |
| **Surplus Listing** | Schools or households snap a photo, enter quantity/type, expiry date | Simple, mobile‑friendly UI encourages frequent use |
| **Live Map & Availability** | Interactive map showing “ready for pick‑up” pins with basic info | Visual, intuitive—judges love strong UX |
| **Volunteer Matching** | Auto‑matches nearby volunteers by distance + availability windows | Demonstrates algorithmic complexity & real‑world impact |
| **In‑App Chat & Notifications** | Volunteers and lister coordinate drop‑off/pick‑up logistics | Completes the flow—no external email or phone needed |
| **Donation Tracking & Stats** | Dashboard shows total meals rescued, carbon saved (estimates) | Leverages data to highlight social/environmental impact |
| **Admin Mode (Stretch)** | Food‑bank/shelter users confirm received items, update needs calendar | Closes feedback loop; shows end‑to‑end solution |

## **🛠 Tech Stack Suggestions**

* **Frontend:** React or Vue.js with Material‑UI or Tailwind CSS
  + Mobile‑first PWA so volunteers can access on any phone
* **Backend:** Node.js + Express or Python Flask
* **Database:** Firebase Firestore or MongoDB Atlas
* **Realtime & Notifications:**
  + Firebase Cloud Messaging (FCM) for push alerts
  + Socket.IO for in‑app chat
* **Mapping:** Google Maps JavaScript API (pins, geolocation)
* **Algorithm:** Simple nearest‑neighbor matching (Haversine distance)
* **Hosting:** Vercel/Netlify for frontend, Heroku/Render for backend

## **🚀 Why This Will Wow the Judges**

1. **Completion & Complexity**
   1. Combines CRUD, real‑time updates, mapping, and notifications in one cohesive flow.
2. **Originality & Purpose**
   1. Focuses on food waste at the hyper‑local school/community level—a fresh twist on food‑rescue apps.
3. **Social Impact**
   1. Directly addresses hunger and sustainability, with measurable metrics (e.g., “meals saved,” “CO₂ avoided”).
4. **UX**
   1. Mobile‑first, map‑centric interface ensures volunteers and listers can collaborate seamlessly.
5. **Growth Potential**
   1. Can expand into multi‑school networks, corporate cafeterias, or smart‑fridge integrations.

## **📋 Demo Plan**

1. **List a Meal (“Surplus Listing”)**
   1. Show quick mobile form: photo, description, pickup window.
2. **Map & Match**
   1. Volunteer sees pin, clicks to view details & “Claim Pickup.”
3. **In‑App Chat & Confirm**
   1. Exchange messages; shelter admin toggles “Received.”
4. **Dashboard Metrics**
   1. Display total meals rescued in this demo and estimated carbon saved.

PantryShare strikes the perfect balance of **innovation**, **technical depth**, and **tangible social good**—ideal for high‑school devs to build in a week and guaranteed to impress the judges. Good luck at LionHacks Summer 2025!