Project Concept: BeaconMatch

Tagline: *The Tinder-style Mesh Network for Hyper-Local Disaster Response*.

1. The Problem

In the wake of a major disaster (earthquake, flood, or fire), two critical failures occur:

- **The Communication Blackout:** Cellular towers and power grids fail, leaving victims invisible and rescuers blind.

- **The Orchestration Gap:** Even when people want to help, there is no efficient way to match a neighbour's specific skill (e.g., "I have a chainsaw") with a nearby need (e.g., "Tree blocking my door") without scrolling through chaotic social media feeds.

2. The Solution: BeaconMatch

BeaconMatch is a mobile application that uses **Tinder-inspired UX** and **Offline Mesh Networking** to facilitate neighbor-to-neighbor aid when the internet is down. It turns every smartphone into a survival beacon and a resource router.

3. Core Features

- **Offline "Pulse" Mesh:** Uses Bluetooth Low Energy (BLE) to create a peer-to-peer network. Phones "talk" to each other to share SOS signals and resource locations without needing 4G/5G.

- **The Skill-Share Swipe:** * **Requesters** create a simple "Need Card" (Medical, Food, Rescue).

    - **Providers** see a stack of nearby missions and "Swipe Right" to commit to helping.

- **Ultra-Low Power "Survival UI":** An OLED-black, high-contrast interface designed to save every drop of battery while providing a "compass-style" guide to the nearest match.

- **Verified Trust Layer:** Pre-disaster "Peacetime" verification where users can validate their medical licenses or equipment (e.g., drones, boats) to build community trust.

4. Why It's Unique

- **Zero-Infrastructure:** It doesn't need a single cell tower to function.

- **Lizard-Brain UX:** In high-stress situations, people can't fill out forms. Swiping is an instinctive gesture that reduces "cognitive load."

- **Passive Rescue:** The "SOS Heartbeat" allows a phone to act as a beacon even if the user is unconscious or trapped.

5. The "Peacetime" Hook

To solve the "Critical Mass" problem, the app functions daily as a **Community Tool Library**. Neighbours use it to borrow ladders or find local volunteers, ensuring the app is already installed and the mesh is "warm" before a disaster strikes.

Technical Requirements (The "Build" List)

- **Framework:** React Native or Flutter (for cross-platform iOS/Android).

- **Mesh Library:** Integration with a protocol like *Bridgefy* or *Google Nearby Connections*.

- **Storage:** Local SQLite database for offline map caching.

- **Sensors:** Utilization of Accelerometer/Gyroscope for "Dead Reckoning" location tracking.