Hack the Grid

Problem Statements

Track 1: Open Innovation

Disaster Response Communication Platform

When disaster strikes, communities need a way to stay connected even when traditional infrastructure fails. The platform should function like an "emergency internet," allowing people to:

- Send messages and location data without cellular networks
- See real-time maps of available resources (water, food, medical aid)
- Request and offer help through a simple interface
- Coordinate rescue efforts across multiple agencies

Expected Outcome: During a crisis, anyone with a smartphone can open the app and immediately connect to a local network. Aid workers see a live map of needs and resources, while affected residents can quickly signal for help or find nearby assistance.

Urban Food Waste Reducer

Picture a system that connects excess food with those who need it in real-time. Like a "food rescue Uber," it should:

- Show live maps of available food donations
- Display food bank capacity and needs
- Present optimal collection routes
- Track food safety timestamps
- Show impact metrics (meals saved, carbon reduced)

Expected Outcome: Restaurants and stores can post surplus food that automatically matches with nearby recipients. Volunteer drivers see optimized routes, and food banks get advance notice of incoming donations, all while tracking the community impact.

Open Problem Statement

Bring Your Own Innovation! This track is for groundbreaking ideas that don't fit the conventional mold.

We're looking for:

- Novel solutions that haven't been attempted before
- Innovative approaches to emerging challenges
- Solutions that challenge current technological paradigms
- Ideas that could reshape how we live, work, or interact

Your solution should:

- Demonstrate clear technological innovation
- Have potential for real-world implementation
- Show a path to scalability
- Create significant value for users

Expected Outcome: Teams should present:

- Working prototype of their innovation
- Clear explanation of what makes their solution unprecedented
- Technical architecture showing feasibility
- Target market and growth potential
- Real-world impact projection

Note: Solutions that replicate existing products or make minor improvements to current solutions will not be considered. Focus on breakthrough innovations that could define new categories or reshape existing industries.

Track 2: Web3-Blockchain

Decentralized Carbon Credit Marketplace

Imagine a transparent carbon credit system where:

- Companies can buy and sell verified carbon credits
- Small businesses can participate in the carbon market
- Anyone can track the journey of carbon credits
- Real environmental impact is verified and visible
- Credits can't be double-counted or misused

Expected Outcome: A platform where companies of any size can trade carbon credits as easily as stocks, with full transparency of where credits come from and how they're used. The public can view the environmental impact of any participating company.

Product Journey Tracker

Think of a "digital passport" for products that:

- Shows the complete journey from raw material to store shelf
- Verifies authentic products vs counterfeits
- Reveals the environmental impact of each production step
- Allows consumers to scan and see product history
- Protects sensitive business information

Expected Outcome: Consumers can scan any product to see its authentic history, from source to store. Brands can prove their ethical sourcing claims, and retailers can instantly verify authentic products.

Track 3: AI & Machine Learning

Remote Healthcare Assistant

A system that serves as a "virtual specialist" for remote healthcare workers:

- Analyzes patient symptoms across multiple inputs
- Suggests potential diagnoses with confidence levels
- Identifies urgent cases needing immediate attention
- Works without constant internet connection
- Adapts to local disease patterns
- Explains its reasoning in clear medical terms

Expected Outcome: Healthcare workers in remote areas can input patient data and receive specialist-level insights within minutes, helping them make better decisions about treatment and referrals.

Truth Detective (Fact-Checker)

A system that acts like a "digital fact-checker" by:

- Analyzing news across text, images, and videos
- Identifying manipulated content
- Tracking how misinformation spreads
- Finding the original sources of content
- Explaining why something is likely false
- Showing related fact-checks

Expected Outcome: Users can input any piece of content and quickly understand if it's likely to be true or false, with clear explanations of the analysis and links to verified sources.

Track 4: Fintech & DeFi

Global Merchant Payment System

Think of it as "PayPal for the unbanked" that:

- Processes international payments instantly
- Costs less than traditional money transfers
- Works with multiple currencies
- Prevents fraud automatically
- Keeps records for small business accounting
- Operates on basic smartphones

Expected Outcome: Small merchants anywhere can accept international payments as easily as local ones, with instant settlement and minimal fees, helping them participate in the global economy.

Universal Credit Score

A new kind of credit score that:

- Works for people without banking history
- Considers alternative data (utility bills, rent, business income)
- Gives users control over their data
- Provides clear reasons for scores
- Works across countries and financial systems
- Helps people improve their creditworthiness

Expected Outcome: Anyone can build a verified credit history regardless of their banking status, helping them access financial services. Lenders get a more accurate picture of creditworthiness, especially for traditionally excluded populations.