

WEB DEVELOPMENT

PROBLEM STATEMENTS

1. Resilient Web: Zero-Connectivity Disaster Response Platform

Problem Statement

During disasters, internet connectivity is often unreliable or unavailable, making web platforms unusable when they are needed most. A resilient web system is required to operate effectively under zero or intermittent connectivity.

Core Challenge

- Enable core functionality in offline mode
- Capture and store user and location data locally
- Securely synchronize data when connectivity is restored
- Resolve data conflicts without loss
- Ensure scalability and performance in crisis scenarios

2. Pharmaceutical Supply Chain Verification & Counterfeit Detection

Problem Statement

Counterfeit medicines pose serious health risks due to lack of transparency in pharmaceutical supply chains. A web-based verification system is required to ensure drug authenticity from production to purchase.

Core Challenge

- Track medicines across the supply chain digitally
- Verify authenticity at point of purchase

- Detect and flag counterfeit products
- Support regulators and recalls
- Protect patient privacy while maintaining transparency

3. Cultural Heritage Preservation & Intergenerational Knowledge Transfer

Problem Statement

Cultural knowledge is rapidly disappearing due to lack of accessible digital preservation tools. Communities need a platform to preserve, share, and pass on heritage knowledge across generations.

Core Challenge

- Support multiple languages and media formats
- Enable audio/video access for non-literate users
- Function in low-connectivity environments
- Ensure content authenticity and ownership
- Protect intellectual and cultural rights

4. Chronic Disease Management & Peer Support for Underserved Communities

Problem Statement

Underserved communities often lack affordable and continuous support for managing chronic diseases. A low-cost, community-driven web platform is required to improve long-term health outcomes.

Core Challenge

- Track medications, symptoms, and daily habits
- Provide culturally relevant health guidance
- Enable peer and community support
- Link users to affordability and care resources
- Minimize dependency on healthcare providers

5. Abandoned Child Care Crisis Response System

Problem Statement

In emergencies, children may be left without immediate caregiver support. A secure web-based system is required to ensure rapid and trusted child care response when parents are unavailable.

Core Challenge

- Create trusted caregiver networks in advance
- Automatically notify guardians during emergencies
- Enable rapid and safe child pickup
- Operate during connectivity failures
- Protect child safety, privacy, and parental authority

6. Neurodivergent Workforce Integration & Support Platform

Problem Statement

Neurodivergent individuals face barriers in traditional hiring and workplace systems. A web platform is needed to connect neurodivergent talent with inclusive employers.

Core Challenge

- Match individuals to roles based on strengths
- Support workplace accommodations
- Enable inclusive hiring workflows
- Assist long-term retention and success
- Promote accessibility and clarity in design

7. Artistic & Creative Industry Copyright Protection

Problem Statement

Artists struggle to protect ownership and monetize their work in digital environments. A creator-focused web platform is required to safeguard rights and ensure fair compensation.

Core Challenge

- Register and timestamp creative works
- Provide immutable proof of ownership
- Detect unauthorized use online
- Enable simple licensing and payments
- Support collective rights enforcement

8. Language Preservation Through Community Media

Problem Statement

Many languages are at risk of extinction due to lack of engaging learning platforms. Communities need modern web tools to preserve and promote language use among younger generations.

Core Challenge

- Support multimedia content creation
- Enable non-experts to create content
- Support multiple scripts and writing systems
- Gamify and encourage peer-based learning
- Connect language use to daily life and social platforms

9. Informal Sector Business Formalization Support

Problem Statement

Informal workers face complex and risky processes when transitioning to formal businesses. A supportive web platform is required to guide gradual and low-risk formalization.

Core Challenge

- Provide step-by-step business guidance
- Simplify registration, tax, and compliance processes
- Explain costs and benefits transparently
- Preserve flexibility of informal work
- Track and showcase successful transitions

10. Microfinance Platform for Women Entrepreneurs

Problem Statement

Women entrepreneurs in patriarchal contexts face financial, legal, and social barriers to business growth. A culturally

sensitive web-based platform is required to support their financial independence.

Core Challenge

- Enable access to microcredit and training
- Support peer accountability and repayment
- Engage families and communities appropriately
- Track economic and empowerment outcomes
- Scale across diverse regions and cultures