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On Campus

TechSprint

Leveraging the power of AI

Team Details

a. Team name: INFINITY LOOPERS
b. Team leader name: ARHAM JAIN
c. Problem Statement: Open Innovation

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Problem Statement & Solution

The Problem:

Millions rely on **unmonitored** water sources, where contamination often goes **undetected** until health issues appear. The **real problem** isn't just dirty water; it's not knowing it's dirty in **time**.

The Solution:

AquaMonitor is an **IoT-based** system providing continuous, real-time water quality analysis with immediate, bilingual safety alerts

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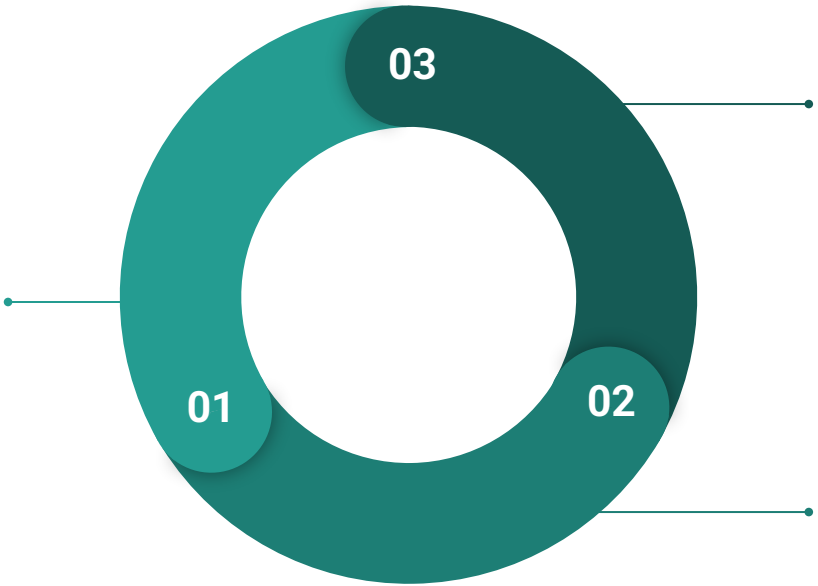
Opportunities & Differentiation

Bilingual Support:

Unlike commercial systems, AquaMonitor provides health advice in local languages (e.g., Hindi), increasing community trust.



Low Cost & Scalable:

Built with accessible hardware for widespread deployment in rural and semi-urban areas

Hybrid Data Entry:

Accepts both automatic IoT sensor data and manual user inputs for maximum reliability

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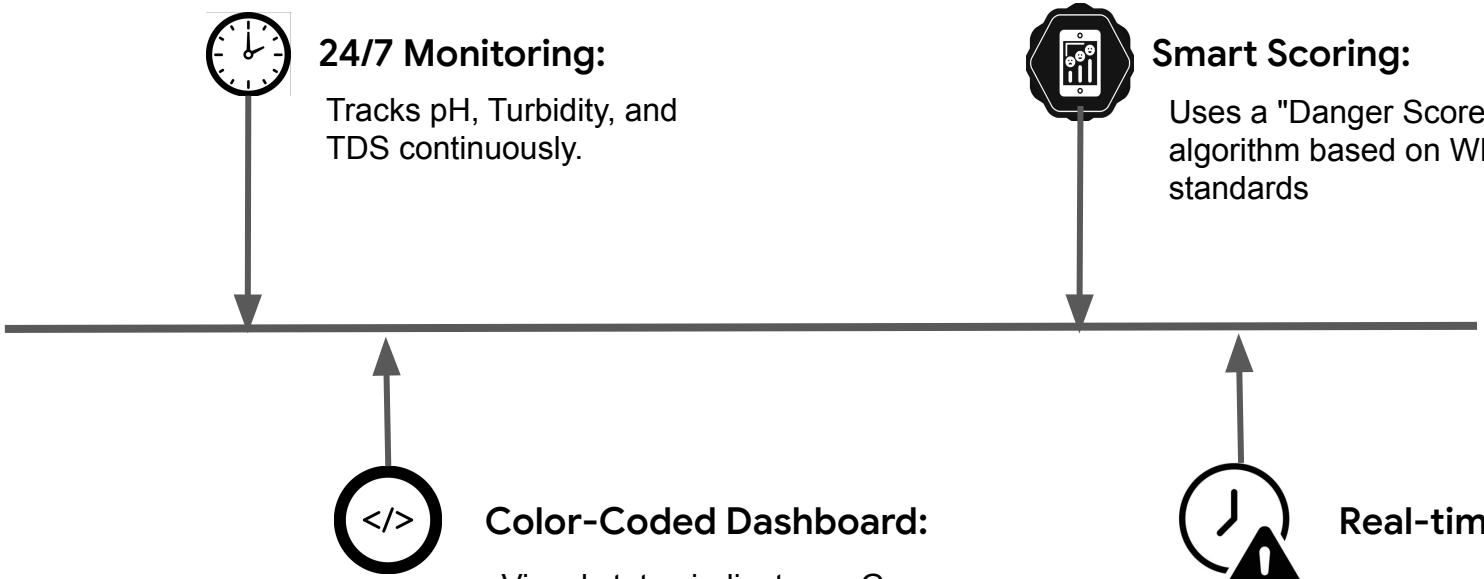
List of Features



24/7 Monitoring:

Tracks pH, Turbidity, and TDS continuously.

Smart Scoring:

Uses a "Danger Score" algorithm based on WHO standards

Color-Coded Dashboard:

Visual status indicators—Green (Safe), Yellow (Caution), and Red (Unsafe).

Real-time Alerts:

Immediate notifications and health advisories.

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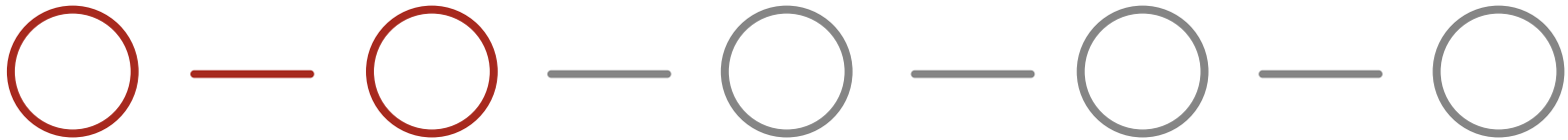
Google Technologies Used



AI Studio by Google

Used for backend code development.

Stitch with google

Used for designing website UI

Google NotebookLM

Used for designing infographics.& flow diagram

Google Slides & Scholar

For presentation making and research data sets.

Google Gemini:

Utilized for project planning and organization.

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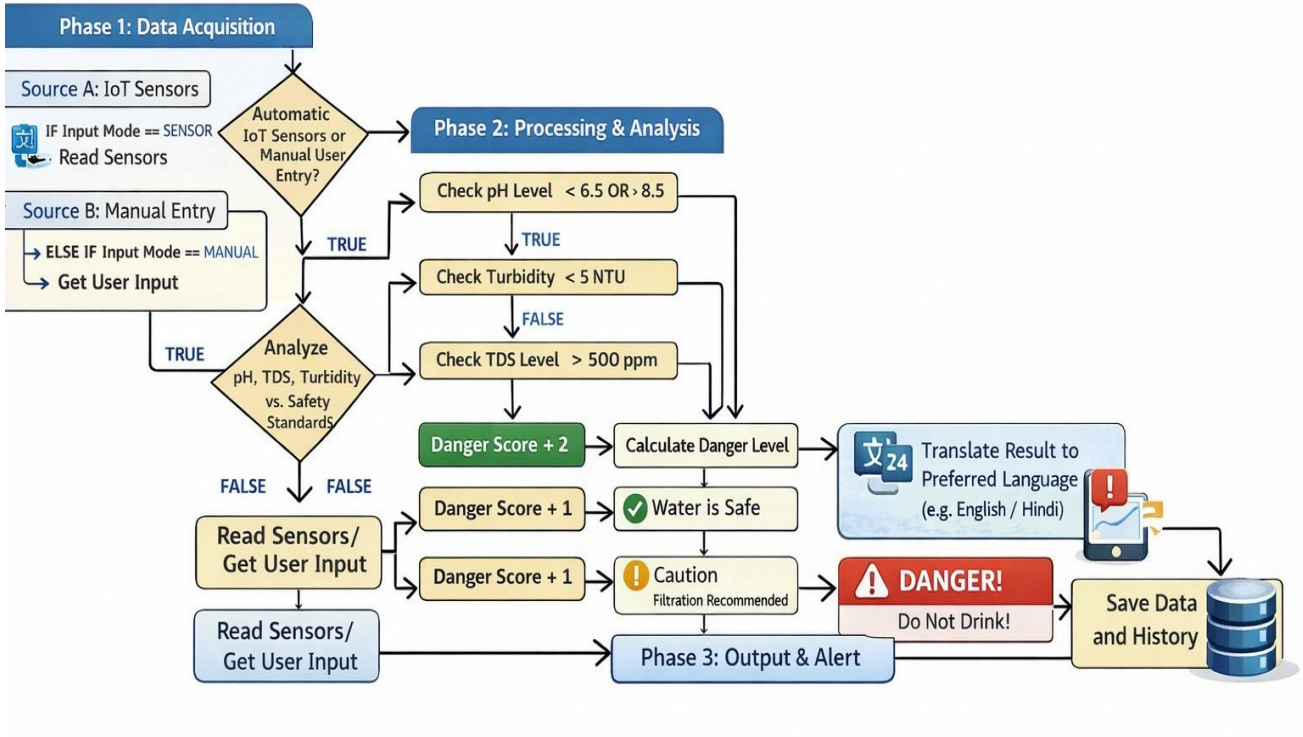
Process Flow Diagram



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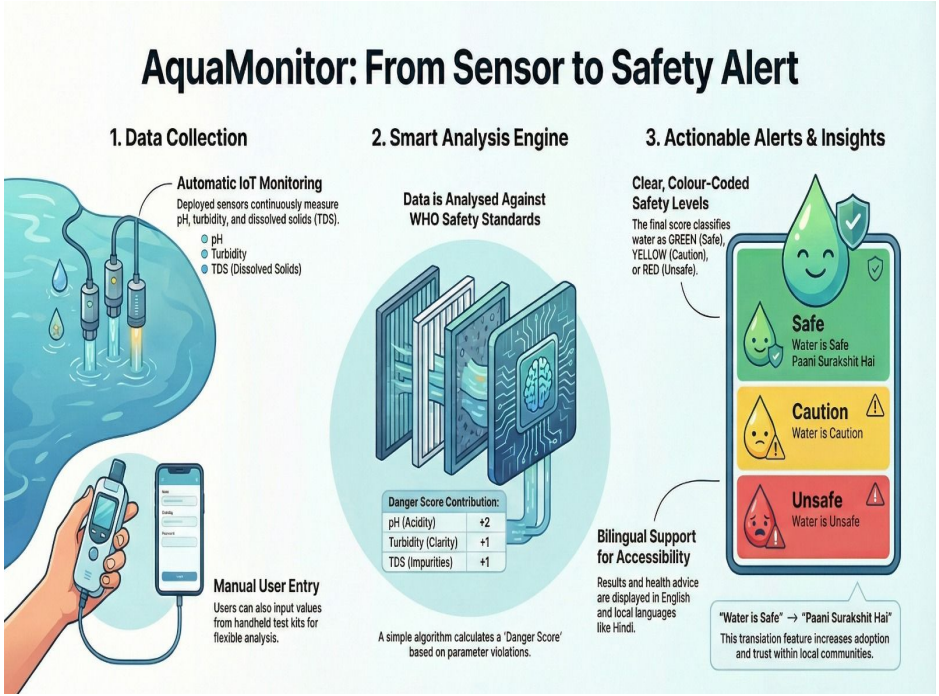
Architecture Diagram

Hardware Layer:
ESP32 Controller, pH/Turbidity/TDS sensors, and Battery Management System.

Cloud/Software Layer:
Data validation and safety algorithm processing.

Interface Layer:
Web portal for visualization and bilingual alert delivery.



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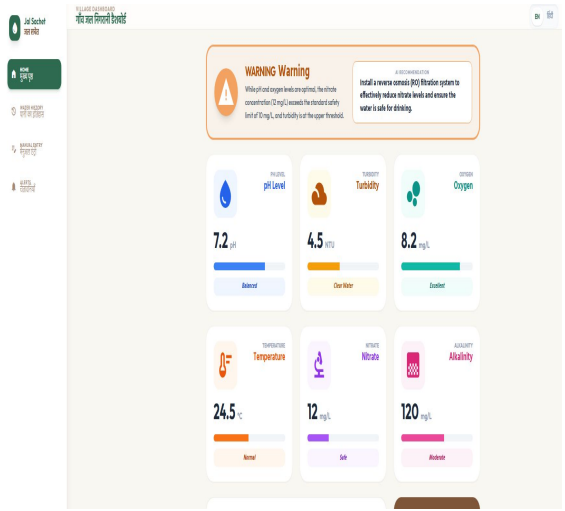
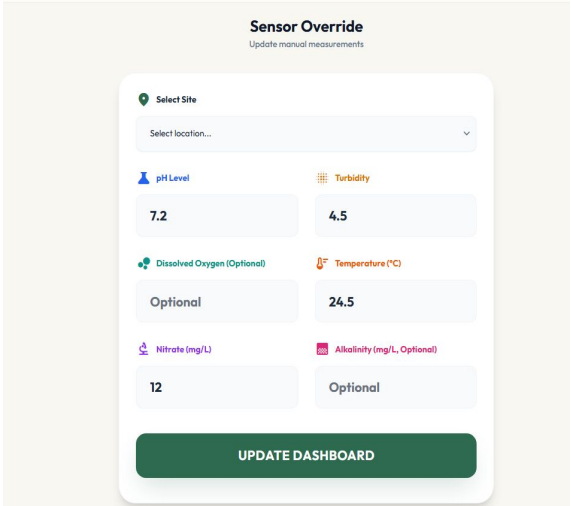
Snapshots of the MVP

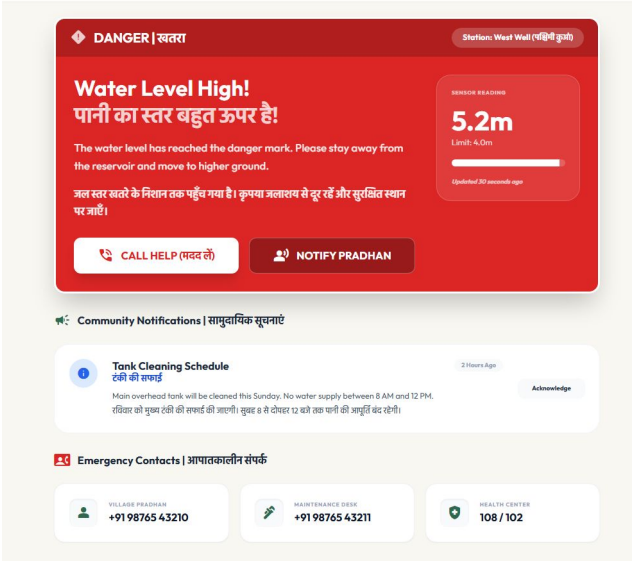
The **Real-time Visualization** of water parameters.



The **Manual Entry Interface** for offline areas.



The **Bilingual Alerts** (e.g., "Paani Surakshit Hai").



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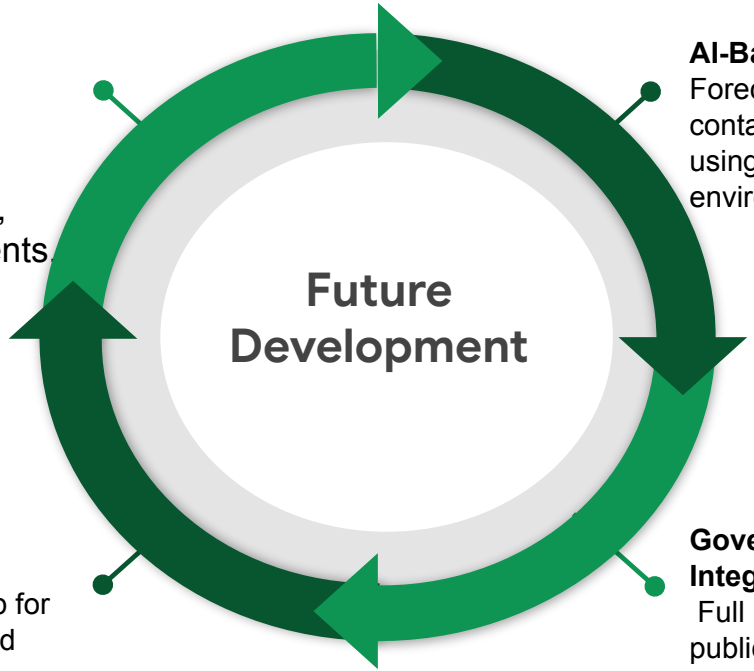
Energy Independence:

Integrating solar power for remote, off-grid deployments.



AI-Based Prediction: Forecasting contamination events using historical and environmental data.

Mobile App:

Dedicated native app for push notifications and offline access.

Government Integration

Full integration with public health dashboards.

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Thank you!