



# SwasthGram – Community Hygiene Risk Radar

## Project Documentation for Hackathon Submission

### Project Overview

**SwasthGram** is more than just a tech tool — it's a digital bridge between underserved rural communities and better health outcomes. In many Indian villages, hygiene issues go unnoticed until they become full-blown health crises. SwasthGram steps in to **empower every citizen** — from a school student to a sanitation volunteer — to **report hygiene issues, track their resolution, and help prevent disease outbreaks before they happen.**

What makes this project truly special is how it **combines simple community reporting with AI and gamification**, turning every user into a local health warrior. Using intuitive maps, smart AI tips (via Gemini), and local recognition through badges and leaderboards, **SwasthGram promotes action, not just awareness.**

### Problem Statement

In rural and semi-urban India, public hygiene issues such as **stagnant water, open garbage, and unclean toilets** are widespread. The consequences?

- **Dengue and malaria outbreaks** during monsoons
- **Waterborne diseases** like cholera and typhoid
- **Zero tracking or resolution flow** between complainants and solvers
- Low involvement of citizens in cleanliness drives

The root problem isn't awareness — it's the lack of an easy system to **report, act on, and reward resolution** of hygiene issues.

# Our Solution – SwasthGram

**SwasthGram** is a community-powered hygiene alert and resolution platform built for rural and semi-urban India. Here's how it works:

## Step-by-Step Flow:

### 1. Report Submission

- Users file hygiene issue reports (e.g. stagnant water, garbage piles) with optional photos or PDFs.
- Location can be selected via a map or auto-filled using GPS.

### 2. AI-Powered Hygiene Suggestions

- Gemini (Google's AI) suggests hygiene tips related to the reported issue.
- E.g. “Stagnant water? Use mosquito repellents and don’t store open water.”

### 3. Community Resolution System

- Other users can “take up” an issue, resolve it, and submit proof (image/video/PDF).
- The original reporter is notified to **approve or reject** the resolution.

### 4. Gamified Incentives

- Every approved resolution earns **points**.
- Users receive **badges** for first resolution, 5+ resolved issues, etc.
- A **leaderboard** encourages healthy local competition and recognition.

### 5. Real-Time Risk Alerts

- If 2+ reports for stagnant water occur within 1 km during monsoon, a **Dengue Risk Alert** is triggered.
- Nearby users receive a warning and action tips.

## Core Innovations

Innovation	Description

## Target Audience

Group	Reason
Villagers	To report hygiene issues in real-time using smartphones
SHG Women / Panchayat Members	Trusted on-ground agents who can also resolve/report
Health Department	To monitor rising cases of hygiene neglect or disease outbreak
School/College Students	Engage in Swachh Bharat drives and get rewarded on the leaderboard

## Technology Stack

Layer	Tools
Frontend	React.js, Leaflet.js, Bootstrap

<b>AI Integration</b>	Gemini API
<b>Backend</b>	Django, Django REST Framework
<b>Database</b>	SQLite (dev)
<b>Authentication</b>	JWT Tokens (Login/Register APIs)
<b>Maps + Location</b>	Leaflet.js + HTML Geolocation API

## Key Features

Feature	Impact
<b>Hygiene Reporting</b>	Upload proof + accurate GPS location
<b>Gemini Hygiene Tips</b>	Contextual tips for public health awareness
<b>Solve an Issue</b>	Help community + earn recognition
<b>Approve Resolution</b>	Only the original reporter has final say
<b>Leaderboard &amp; Badges</b>	Fun + motivating system for consistent users
<b>Auto Risk Prediction</b>	Alerts for disease-prone zones
<b>Offline Mode</b>	Queue reports when network is unavailable

## Future Scope

- Integrate weather APIs to predict risk more accurately during monsoons
- Translate AI tips into regional languages (Telugu, Hindi, Kannada etc.)
- Add voice-based reporting for illiterate users
- Build micro-community groups to track local issues collectively
- Deploy a full Android PWA version for offline-first rural access
- Dashboard for govt officials to analyze hygiene trends

## Why This Matters

**SwasthGram** is not just another sanitation app. It's a **movement**, a call to action, and a tool to **empower rural India to take hygiene into their own hands**. With smart logic, light AI, and human-centric design, we believe this platform has the potential to scale, serve, and **save lives**.