

1. SIH 25012 – Automated Attendance System for Rural Schools

Problem Context:

Manual attendance in rural schools eats into teaching time, causes errors, and impacts government reporting (e.g., mid-day meal schemes).

Solution Idea (Simple):

A **low-cost, offline-first mobile app** that automates attendance using either:

- Facial recognition via smartphone camera
- Or QR/RFID scanning

Key Features:

- Snap a class photo or scan codes → attendance auto-generated
 - Offline storage with later sync when internet's available
 - Dashboard for teachers/admins and parent notifications
 - Works on basic smartphones; supports regional languages
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2. SIH 25014 – Waste Segregation Monitoring System for Urban Local Bodies

Problem Context:

Households often mix wet/dry waste, harming recycling efforts and increasing landfill load—awareness alone isn't enough.

Solution Idea (Simple):

A **mobile app-based system** where waste collectors snap photos of household bins; AI assesses segregation quality and provides real-time feedback.

Key Features:

- Collector uses app to take bin photo → AI classifies as segregated or not
 - Feedback sent to households (e.g., sticker or SMS)
 - Authority dashboard with compliance heatmaps and reports
 - Gamified household scores to improve behavior
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3. SIH 25092 – Digital Mental Health & Psychological Support System for Students

Problem Context:

Student mental health issues (anxiety, burnout, isolation) are rising, yet support remains inaccessible and stigmatized—especially in rural/semi-urban institutes.

Solution Idea (Simple):

A **confidential, AI-assisted mental health platform** with:

- Chatbot offering coping strategies + referrals
- Anonymous counselor booking system
- Resource hub (videos, guides) in regional languages
- Peer-support forum with moderation
- Dashboard for admin to track anonymous mental health trends

Key Features:

- Keeps user data private and anonymized
 - Encourages preventive action via tools like PHQ-9 / GAD-7
 - Prioritizes culturally relevant content and low-tech access
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4. SIH 25101 – Remote Classroom for Rural Colleges**Problem Context:**

Rural diploma colleges often lack subject faculty. Poor and unstable data connections make remote video teaching unreliable.

Solution Idea (Simple):

A **hybrid low-bandwidth virtual classroom** optimized for rural conditions:

- Audio-first live streaming + heavily compressed/responsive visuals (e.g., slides)
- Asynchronous access: auto-recorded sessions in tiny size downloadable offline
- Interactive components (quizzes, discussions) via lightweight text UI
- Easy-to-use platform—just a smartphone or computer for educators

Key Features:

- Adaptive audio/video delivery based on connection
- Supports entry-level devices
- Minimal learning curve for both teacher and student

PS ID	Title	Core Idea
25012	Automated Attendance System	Low-cost app with face/QR attendance + offline sync
25014	Waste Segregation Monitoring System	Collector-app + AI checks bin photos, feedback & reports
25092	Digital Mental Health Support System	Private AI-chatbot + resources + counselor booking
25101	Remote Classroom for Rural Colleges	Low-bandwidth audio-first livestream + offline access