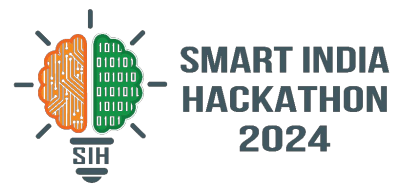


SMART INDIA HACKATHON 2024

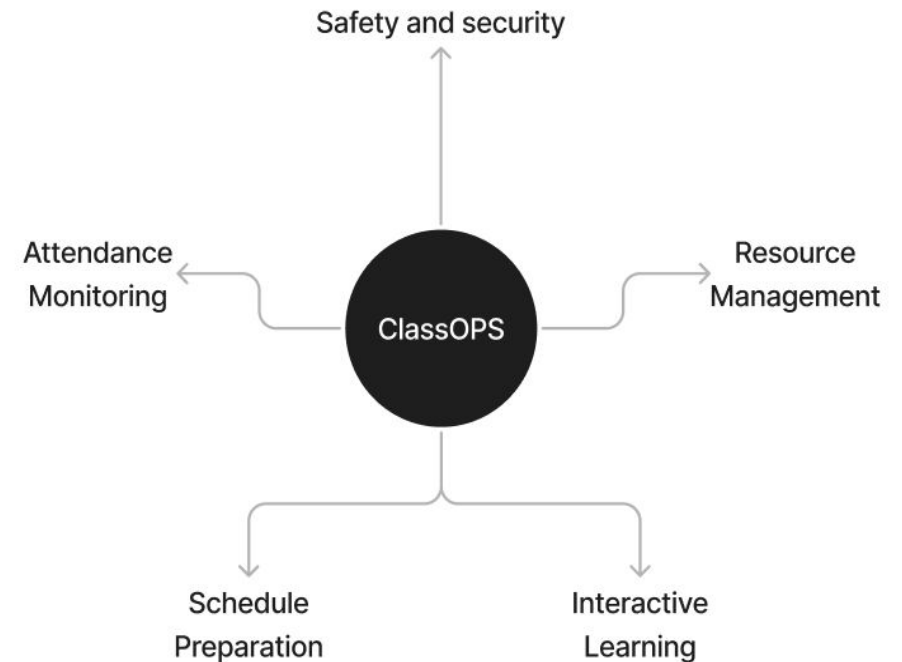


- **Problem Statement ID - 1625**
- **Problem Statement Title - Smart Classroom Management Software for Enhanced Learning Environments**
- **Theme - Smart Automation**
- **PS Category - Software**
- **Team Name - LazyWin**



Proposed Solution:

- Face recognition for automated attendance monitoring
- Push notifications to parents/guardians during security/environmental threats
- Automated schedule management based on curriculum
- Interactive learning platform for students and peers
- Resource management through a schedule based system



TECHNICAL APPROACH

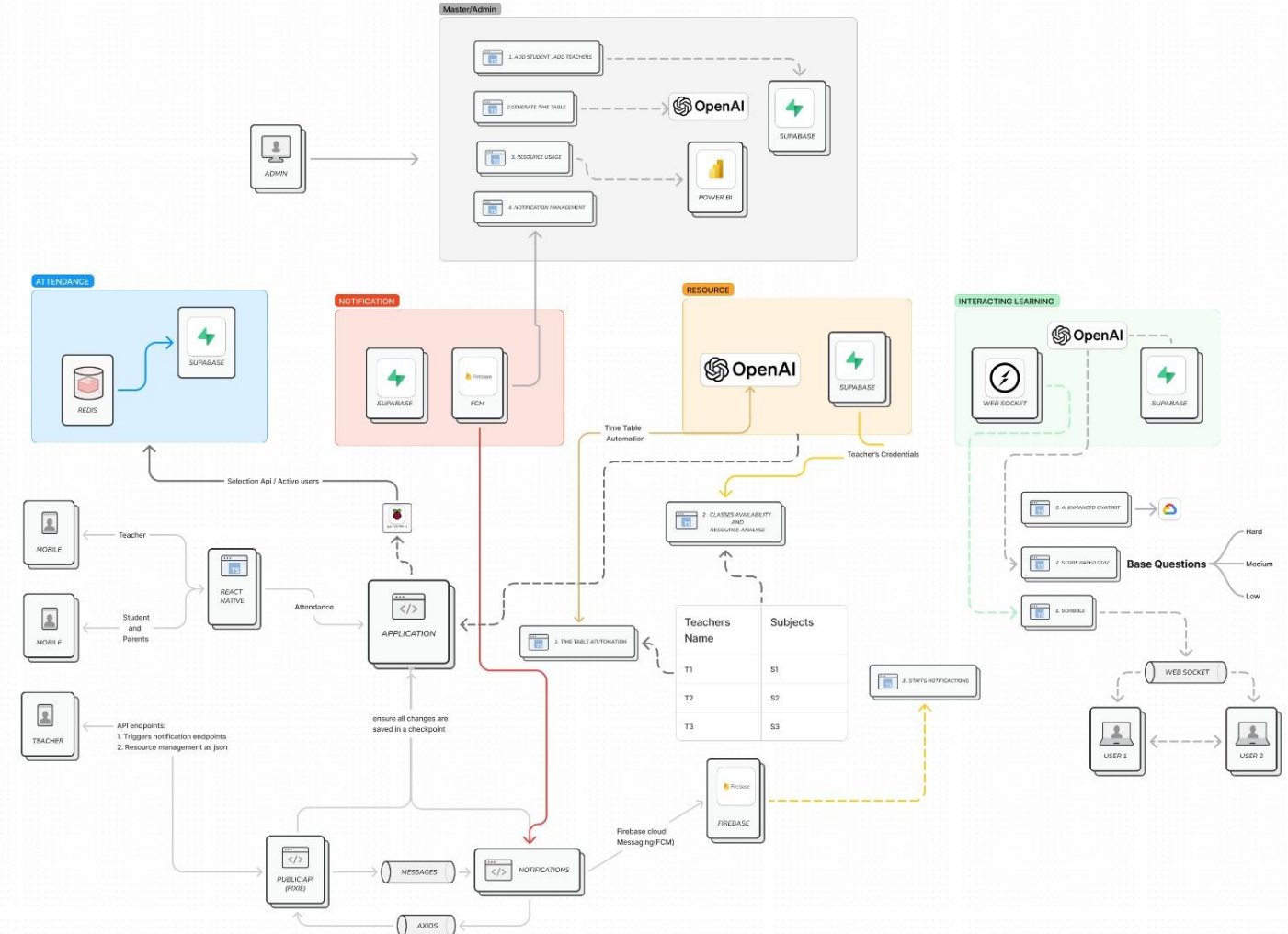
Languages used: TypeScript, Python

Frameworks: React Native, ReactJS
Tailwind, NativeWind, Node, Express,
Websocket, Expo

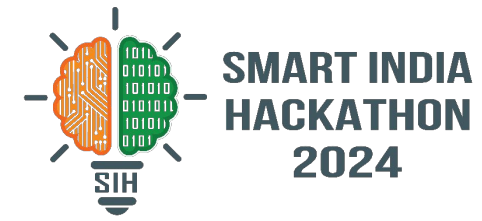
Cloud service providers: Supabase,
Firebase, GCP, PowerBI

Services used: Firestore, FCM, OpenAI

Hardware: Raspberry Pi, Environmental
sensors, EM18 RFID Reader

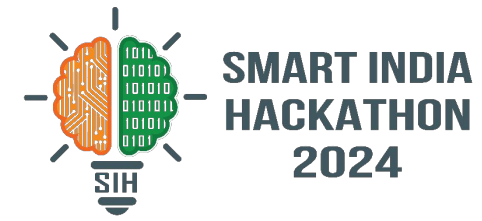


FEASIBILITY AND VIABILITY



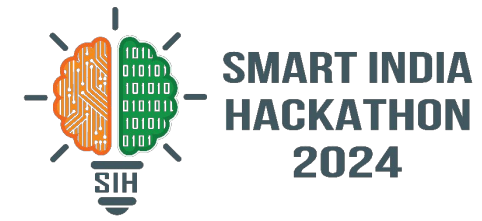
- Affordable and efficient alternative to traditional classroom management.
- Easy to set up, maintain, and monitor, reducing manual tasks.
- Customizable to suit user needs with potential for expansion and optimization.
- Automation allows for a more structured environment.
- Challenges may arise with face recognition and resource management due to human input discrepancies.

IMPACT AND BENEFITS



- Significantly reduces time and resources for task management.
- Elevates monitoring standards through advanced data and statistics.
- Cuts down administrative burden with efficient technology use.
- Provides parents/guardians peace of mind with easy access to student statistics.
- A solution with emphasis on ease of expansion and optimization

RESEARCH AND REFERENCES



- Field work on current systems in play performed by means of inputs from administrative staff and in-depth process analysis
- Research work on the potential capabilities of the system in terms of advancement and technological resources
- Technical expertise/help: [Stack Overflow](#)