

FORTEX36

Smart Attendance and Engagement Tracking System

Team Name : **MATRIX**

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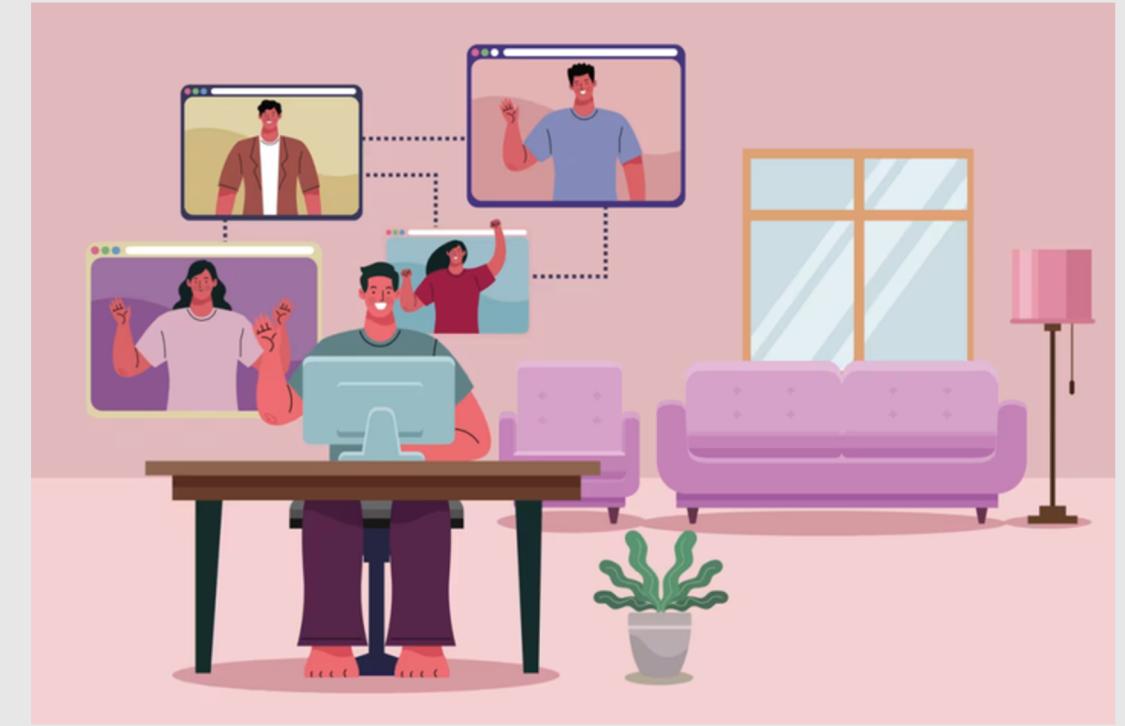
Problem Description :

Traditional attendance methods are time-consuming and error-prone, and they track only presence—not participation—offering no unified way to measure engagement and consistency across offline classes and online meetings.

GIT Repo: https://github.com/kalyanram360/google_meet_ext_2

Problems:

- Traditional attendance is manual, slow, and error-prone
- It records presence, not engagement or participation
- No unified solution for offline classes and online meetings



Motivation:

- Low engagement goes unnoticed
- Educators and organizations lack actionable insights
- Need for a smart, automated, and data-driven system



Who Benefits:

- Students / Employees
- Teachers / Trainers
- Institutions / Organizations

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Solution

A unified system that automates attendance and tracks engagement across both offline classes and online meetings, converting participation data into actionable insights.

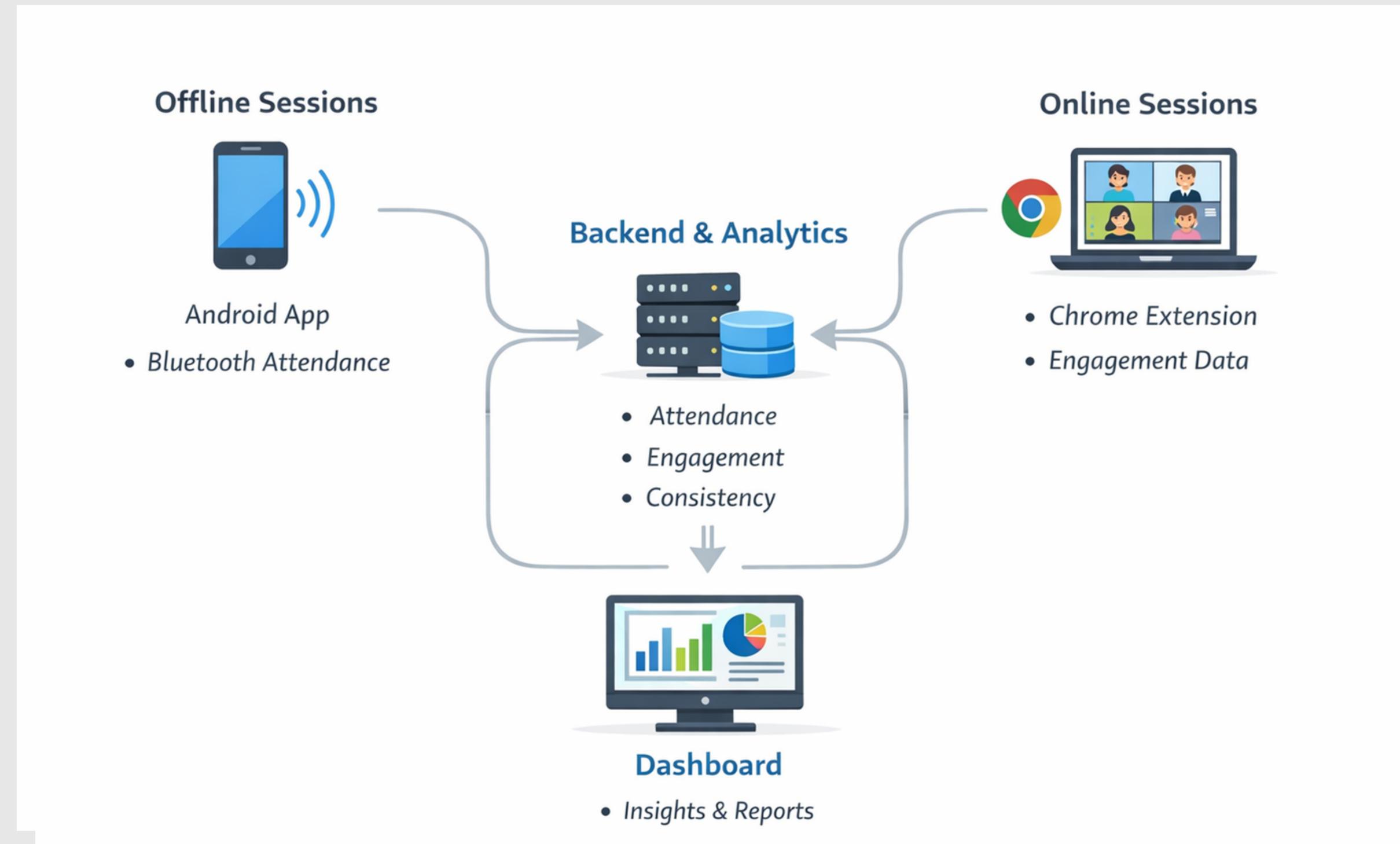
Offline

- Automated attendance using Bluetooth proximity detection
- Marks presence only when users are physically near the session
- Tracks entry time and duration without manual action
- Eliminates proxy and manual roll calls

Online

- Chrome extension for online meetings
- Automatically tracks join/leave time
- Captures engagement signals (chat, activity, mic/camera metadata)
- No recordings; privacy-first approach

Architecture



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Implementation

- Bluetooth-based attendance via Android app
- Online engagement tracking using Chrome extension
- Backend APIs for data processing and analytics
- Unified dashboard for insights

Results & Demo

- Successful offline and online attendance capture
- Real-time engagement and participation data
- Visual dashboards with trends and insights

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Conclusion

- Built a hybrid attendance and engagement system for offline and online sessions
- Automated attendance and captured real engagement metrics
- Delivered actionable insights through analytics dashboards

Future Scope

- AI-based engagement prediction
- Support for Zoom & Microsoft Teams
- Advanced analytics and reporting
- Scalability for large institutions

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