Project Report Template

Title of Project: AI Attendance tracking system
Name of the Innovator: Tharun BR
Start Date:13-10-2025
End Date: 17-10-2025

Day 1: Empathise & Define

Step 1: Understanding the Need

- Which problem am I trying to solve?

I'm solving the problem of Manual and inefficient attendance tracking systems — especially in schools, universities, or workplaces that are time consuming, lack of real time data, human error etc. to solve all this kind of problem I came up with "AI Attendance tracker system".

Step 2: What is the problem?

The problem is manual systems are vulnerable to buddy punching and false entries, leading to payroll fraud, Mistakes in recording attendance or calculating hours can result in disputes and financial losses.

Why is this problem important to solve?

This problem is important to solve because ,AI uses biometric verification (like facial recognition) to eliminate buddy punching and fake check-ins, saving thousands in payroll fraud .

Take-home task

Ask 2-3 people what they think about the project:

- **1. Student (Rural College Student):**
  People generally view AI attendance tracker systems for rural college students as a promising innovation, though opinions vary based on practicality, infrastructure, and privacy concerns.
- **2. Teacher (Career Guidance Teacher):**
  "This project can make a big difference for rural students. Teachers generally view AI attendance tracker systems in rural colleges as a helpful innovation, but their opinions are mixed depending on infrastructure, training, and privacy concerns.
- **3. parent (From a Rural Area):**
  Parents in rural areas generally support AI attendance tracker systems if they improve student discipline and transparency, but they also express concerns about privacy, cost, and technological reliability**.**
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AI Tools you can use for Step 1 and 2:

AI Tools Used:

1. Meta MGX

- **Used as a no-code development tool to design and deploy the AI Attendance tracker.**
- **It helps create interactive workflows, user interfaces, and logic without programming.**
- **Ideal for building features like user registration, location-based data, and skill modules.**

2. ChatGPT

- **Used for idea generation, content structuring.**
- **Helped in framing different idea like generating facial recognisation.**
- **Also useful for generating new kind of features.**

Day 2: Ideate

Step 3: Brainstorming solutions

- List **at least 5 different solutions** (wild or realistic):
- **Face Recognition with Liveness Detection**--Use computer vision to identify and verify individuals through facial recognition.
- **Geo-Fencing with Mobile App Integration** – Track attendance based on GPS location when users enter a predefined zone (e.g., office, classroom).
- **Voice-Activated Check-In**– Allow users to check in using voice commands authenticated by voice biometrics.
- **AI-Powered Anomaly Detection--** Use machine learning to detect irregular patterns (e.g., buddy punching, frequent late arrivals).
- **Calendar & Task Syncing**-- Integrate with calendars (e.g., Outlook, Google Calendar) to auto-log attendance based on scheduled meetings or classes.AI can infer presence from activity logs, reducing manual check-ins.

Step 4: My favourite solution:

It uses AI-powered computer vision to identify individuals and verify their presence in real time. What makes it stand out is the added layer of security—liveness detection ensures that the system can distinguish between a real person and a photo or video spoof. This approach is fast, contactless, and highly accurate, making it ideal for schools, offices, and secure facilities. It also reduces manual errors and eliminates buddy punching, which improves overall attendance integrity.

Step 5: Why am I choosing this solution?

I am choosing **AI attendance tracker system solution because it offers a perfect balance of convenience, accuracy, and security.** Face recognition allows for quick, contactless check-ins, which is ideal for high-traffic environments like college or offices.

AI Tools you can use for Step 3-5:

AI Tools for Step 3–5

1. Meta MGX

- Used to **design and build the AI attendance tracker system** without coding.
- Helps create the facial recognisation **, skill modules, and location-based features**.

2. ChatGPT

- Helps **brainstorm solutions** and generate ideas for AI attendance features.
- Used for idea generation, content structuring.
- Assists in writing content for skill modules, FAQs, and recommendations.

4. AI Research Tools

- **Google Scholar / Research AI** – For exploring existing solutions and innovative ideas for Steps 3–5.
- **AI Text & Summarization Tools** – Helps summarize solutions, select the best approach, and present them clearly.

AI Tools you can use for the take-home task:

Canva AI/CoPilot AI/Meta AI: Use these mobile-based tools to generate images for the solution they want to design

Day 3: Prototype & Test

Step 6: Prototype – Building my first version

What will my solution look like?

- **Face Recognition-Based Attendance Module:** The core of the system will use a camera to capture student faces at the start of each class.
- **Mobile & Web Dashboard for Teachers:** A simple interface where teachers can view attendance records, generate reports, and get alerts for irregular attendance.
- **Data privacy and consent feature :** Short modules for English, aptitude, and soft skills with interactive exercises.
- **Evaluation metrics & iteration :** Measure system performance using metrics like Accuracy of face recognition Time saved per class User satisfaction (via surveys).
- **Design Style:**
- Your AI attendance tracker system should embrace a minimalist design—clean, intuitive, and focused on core functionality. This ensures ease of use for rural educators and students, even with limited digital experience or infrastructure.

Prototype Tools:

- Built using **Meta MGX**, no coding required, with all features **interactive and testable**.

What AI tools will I need to build this?

AI Tools Needed to Build AI attendance tracker system.

1. **Meta MGX**

- No-code platform to **design and deploy the app**.
- Allows building **interactive screens, chat interfaces, and skill modules** without coding.

2. **ChatGPT (or similar LLMs)**
   - To **generate content, conversation flows, and career guidance responses**.
   - Can help **personalize recommendations** for users based on their profile and location.

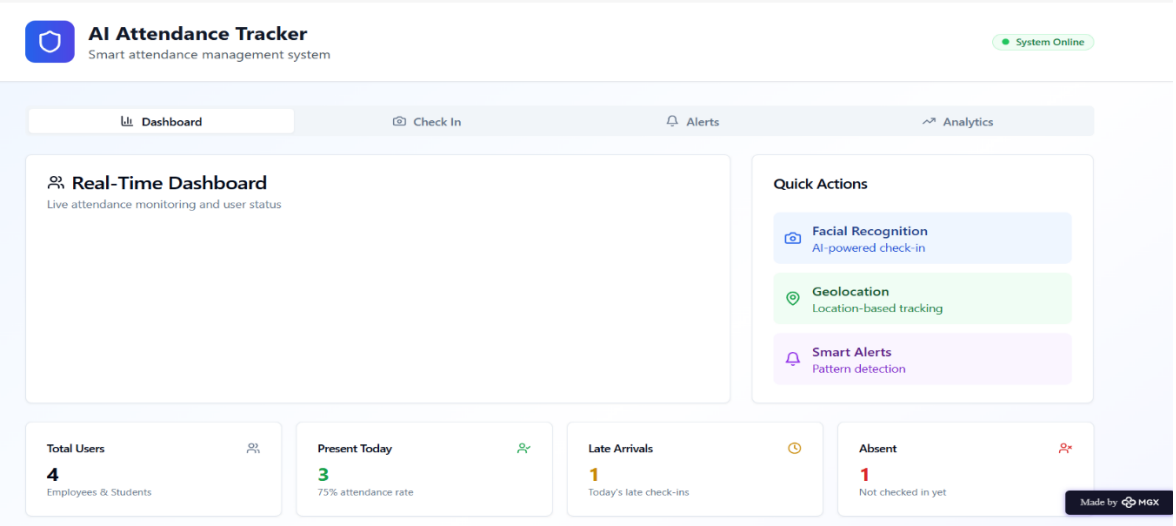
What AI tools I finally selected to build this solution?

1. **Chat GPT**
2. **Metamgx**

< Build The Innovation>

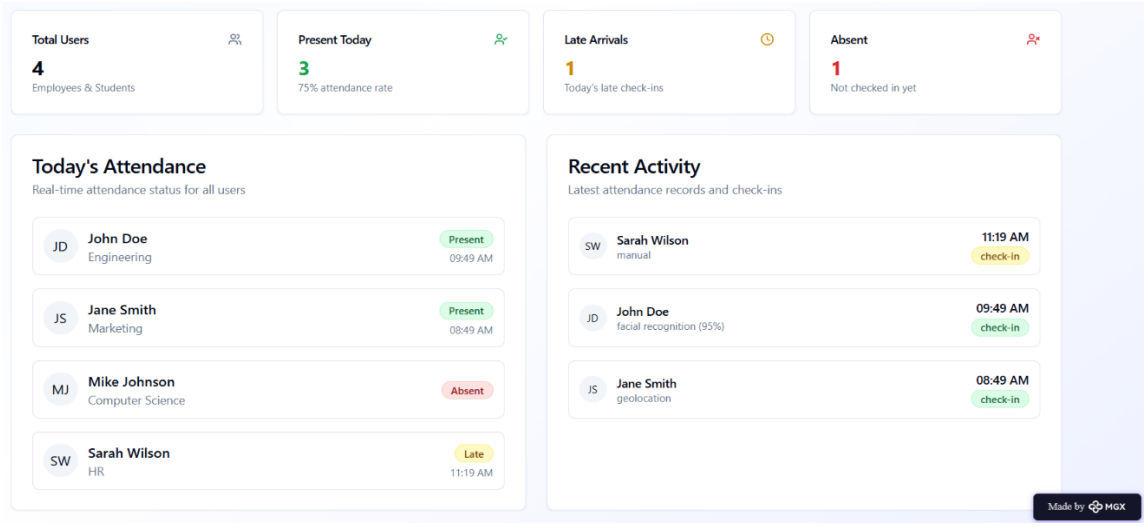
<DASHBOAD OF THE TOOL>

Tool Link: https://mgx.dev/app/6492fe310db84afe888424656469739b

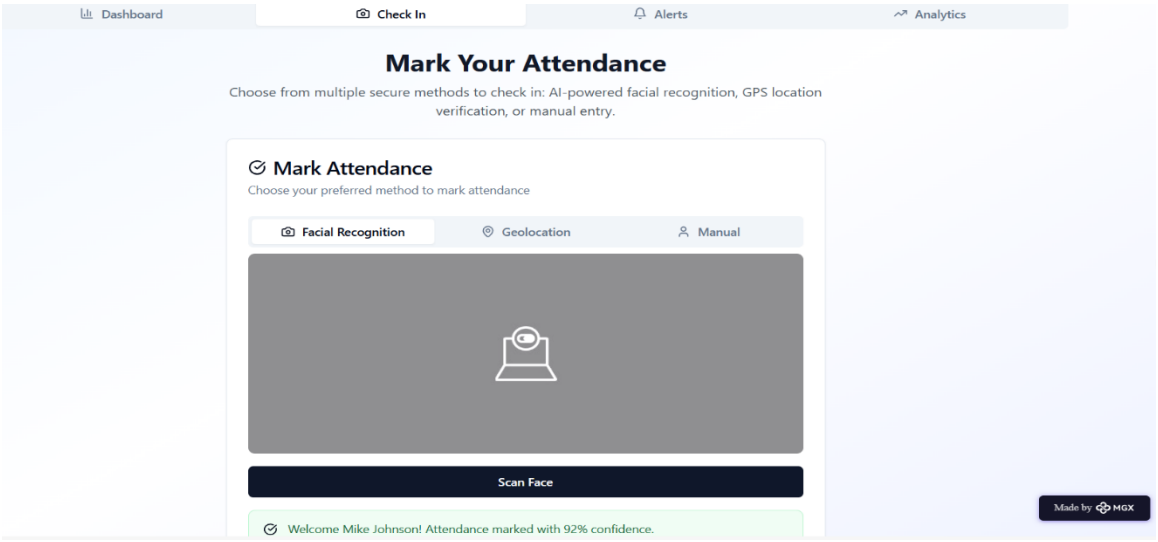


Internal Working of tool:

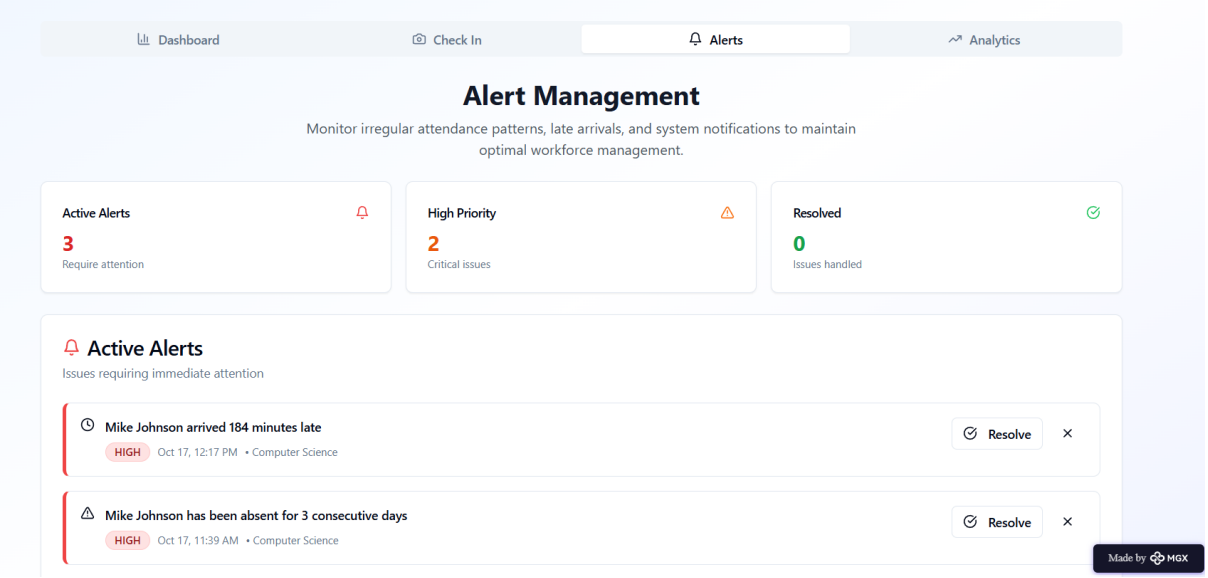
Profile Creation:



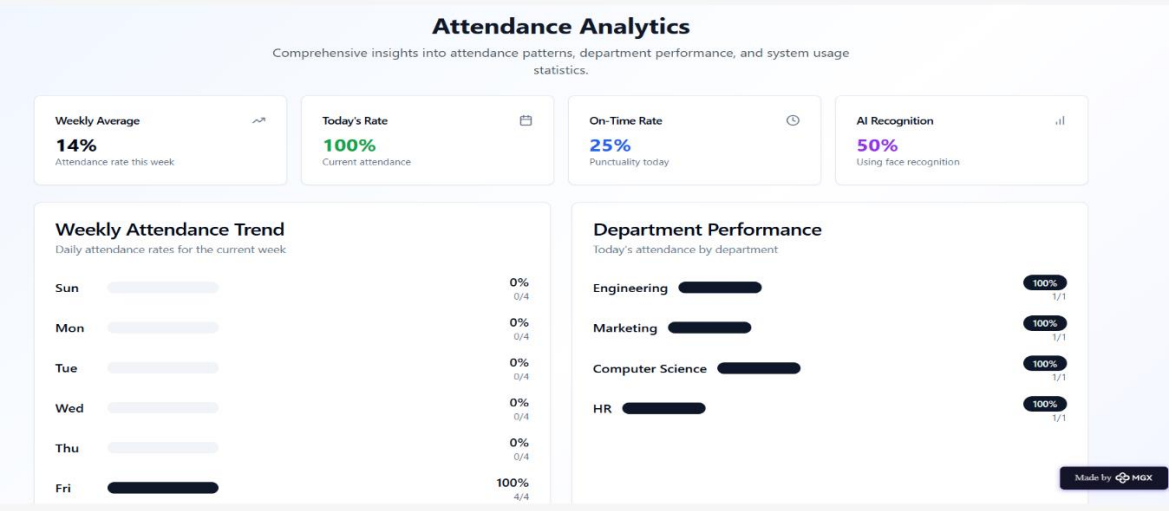
Marking attendance with help of Facial Recognition :



Allert system :



Attendance Analytics:



Step 7: Test – Getting Feedback

- Who did I share my solution with?

I shared my **AI attendance tracker** solution with:

- **Students from rural areas** – to get feedback on usability and relevance.
- **Teachers and career guidance counselors** – to understand how well it supports for teachers.
- **Parents of rural students** – to see if it helps families access information about the students daily update.
- **Peers and mentors** – for suggestions on improving features and design.

What feedback did I receive?

Feedback: Pros and Cons

Pros (Positive Insights from Feedback):

 Time Efficiency: Automates roll call, saving 5–10 minutes per class for teaching.

- **Accuracy**: Reduces proxy attendance and manual errors through face recognition.
- **Transparency**: Digital records are easy to audit and share with parents or authorities.
- **Early Intervention**: Flags frequent absentees, helping teachers support at-risk students.
- **Parent Engagement**: SMS alerts or app notifications keep parents informed daily.
- **Scalability**: Once tested, the system can be expanded across departments or colleges.

Cons (Areas to Improve Noted in Feedback):

Infrastructure Gaps: Poor internet, outdated devices, and low-quality cameras can hinder performance in rural areas.

- **Privacy Concerns**: Facial recognition and mobile tracking may feel intrusive to students and parents.
- **Digital Literacy**: Teachers and students may need training to use the system confidently.
- **Cost of Setup**: Initial investment in hardware, software, and training may be high for underfunded institutions.
- **System Errors**: False negatives (missed attendance) due to lighting or camera issues can cause frustration.
- **Limited Parental Access**: Not all parents have smartphones or internet, reducing the reach of notifications.

My Response for The Feedback:
I appreciate the diverse perspectives shared by teachers, students, and parents regarding the AI Attendance Tracker System. Their feedback has helped me identify both strengths and areas for improvement. The positive reception from parents about real-time notifications and reduced absenteeism reinforces the system's social value.

👍 What works well:

What Works Well

1. **Automated Face Recognition**
   - Reduces manual effort and proxy attendance.
   - Speeds up roll call, saving valuable class time.
2. **Offline Functionality**
   - Designed to work without constant internet, making it practical for rural areas with poor connectivity.

🔧 What needs improvement:

1. **User Training & Digital Literacy**

- **Why**: Teachers and students in rural areas may not be familiar with AI tools.
- **Improve by**: Creating simple training videos, hands-on workshops, and help guides in local languages.

2. **Hardware Optimization**

- **Why**: Low-quality cameras or outdated devices can reduce face recognition accuracy.
- **Improve by**: Testing the system on low-end devices and optimizing for low-light or crowded conditions.

3. **Privacy & Consent Transparency**

- **Why**: Parents and students may worry about surveillance or misuse of data.

AI Tools you can use for Step 6-7:

ChatGPT/Perplexity AI/Claude AI/Canva AI/Chatling AI/Figma AI/Metamgx/Gamma AI: You can use these tools to build solutions/models or mock-up dummy prototypes

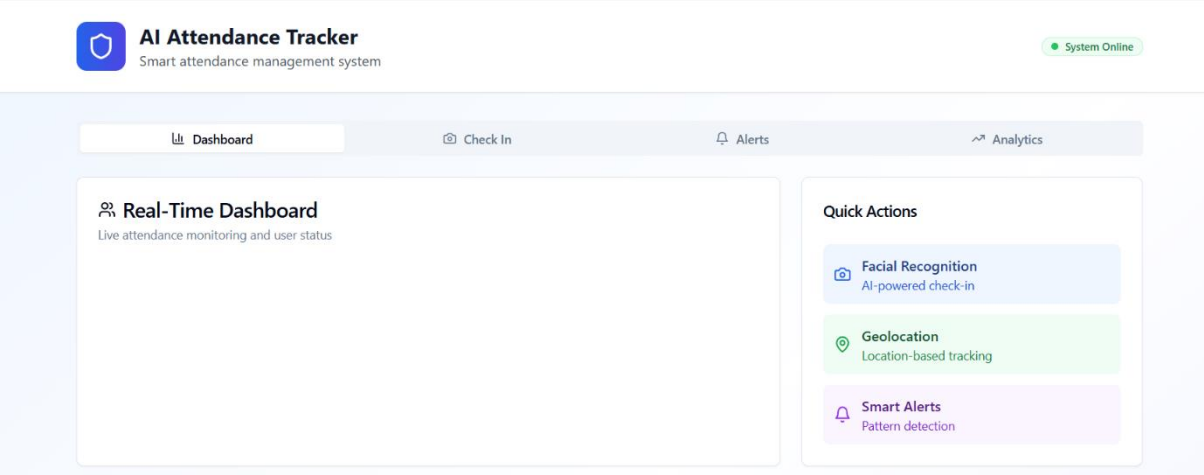
Day 4: Showcase

Step 8: Presenting my Innovation:
I am presenting **CareerPath**, a **digital career guidance and skill development platform** for rural youth. It features:

- An **AI-powered virtual assistant** that provides personalized career, scholarship, and job guidance.
- **Skill development modules** for English, aptitude, and soft skills.
- **Location-based suggestions** for nearby colleges, training centers, and opportunities.
- A **user-friendly, mobile-friendly interface** built on **Meta MGX** with lifetime access and easy updates.

Impact: CareerPath helps students make informed decisions, improves employability, and bridges the guidance gap in rural areas.

<SHOWCASE YOUR INNOVATION TO YOUR PEERS>



Step 9: Reflections

- What did I enjoy the most during this project-based learning activity?
- What I enjoyed the most during this project-based learning activity was the **real-world problem-solving experience**. Designing an AI attendance tracker for rural colleges allowed me to blend **technology with social impact**, which made the learning deeply meaningful. I especially loved

What was my biggest challenge during this project-based learning activity?

The biggest challenge I faced during this project-based learning activity was **designing a solution that works effectively in rural environments with limited infrastructure**. While building an AI attendance tracker sounds exciting, I had to constantly think about:

Take-home task

https://github.com/tt237530-png/Ai-attendance-tracker-system_-project-report

AI Tools you can use for Step 8:

Canva AI: You can use this to design your pitch document. Download your pitch document as a PDF file and upload on GitHub