

# **COURSE PROJECT**

**GENERATIVE AI COURSE**

## **SMART ATTENDANCE SYSTEM**

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OUR TIME

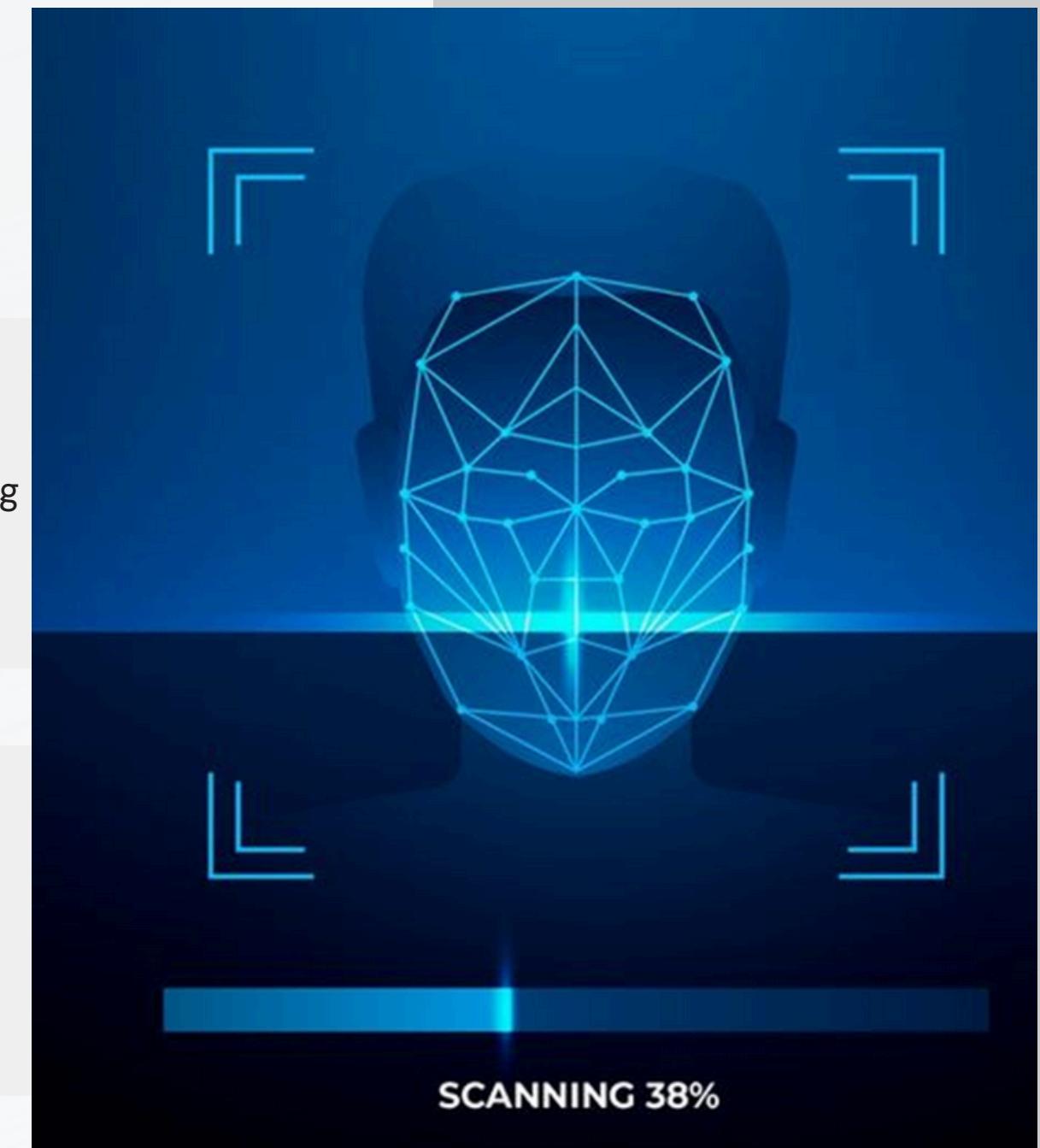
# ABOUT



A Smart Attendance System is a technology that uses facial recognition to automatically mark when someone is present. Instead of calling out names or using manual methods like signing in, this system scans a person's face and matches it with stored data to record their attendance.



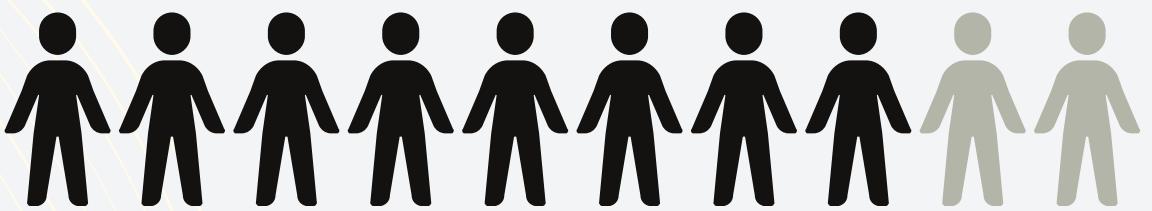
It's fast, accurate, and reduces errors, making it great for schools, workplaces, and events where managing attendance efficiently is important. It also prevents cheating, like someone signing in for someone else, and keeps everything secure and automated.



# FACIAL RECOGNITION TECHNOLOGY

Approximately 80% of people worldwide are in countries where facial recognition technology is being used or tested for various applications, including attendance systems.

**80%**



# GOAL

## Facial Recognition Setup

Implement a reliable facial recognition model (e.g., FaceNet or Dlib) to accurately detect and match faces in real-time.



## Database Integration

Connect the system to a database that securely stores and updates attendance records, ensuring seamless data management.

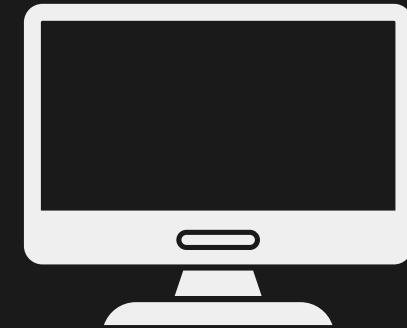


## Interface & Testing

Design a user-friendly interface for easy operation and conduct extensive testing to ensure the system works reliably across different environments.



# MODEL USED



In Smart Attendance System project, the model typically used is a pre-trained Convolutional Neural Network (CNN) for facial recognition. Specifically, models like FaceNet or Dlib's Face Recognition Model are popular choices:

- FaceNet: This model maps faces to a 128-dimensional embedding space, allowing the system to compare facial features efficiently and identify individuals accurately.
- Dlib's Face Recognition Model: Built on a ResNet architecture, it's known for its reliability and ease of use with Python, providing robust facial recognition capabilities.

These models help the system capture and identify faces quickly and accurately, making them suitable for attendance applications.

# USE CASES

01

## Schools & Colleges

Automates student attendance, reducing manual effort for teachers and preventing proxy attendance.

02

## Healthcare Facilities

Tracks staff attendance across shifts, ensuring accurate records and better workforce planning.

03

## Construction Sites

Ensures accurate tracking of worker attendance on-site, improving security and time management for large projects.

04

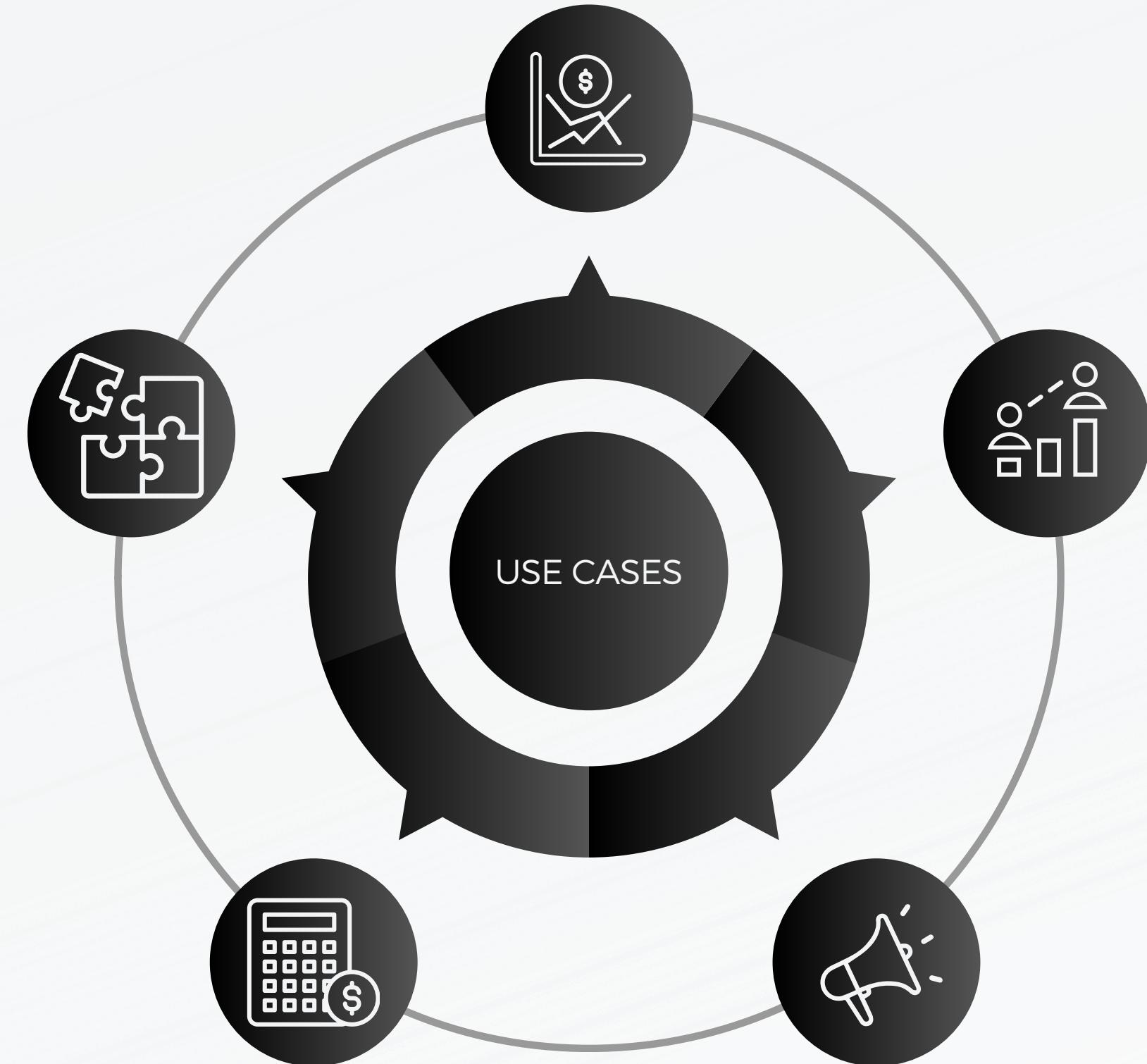
## Factories

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05

## Mining Sites

Ensures accurate attendance records in remote areas, improving safety and workforce accountability.



# OUR TEAM



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**THANK'S FOR  
WATCHING**

