

**Silver Oak University**

**Silver Oak College of Computer Application**

**Department of Computer Application**

**Masters of Computer Application (MCA) Minor Project 01 (2040237291)**

-: Presented By :

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1. **- PROJECT TITLE**

**Face Recognition Attendance System**

1. **- PROBLEM DEFINITION**

**Face Recognition:** A biometric technology that identifies or verifies a person’s identity using facial features.

**Attendance System:** A system that tracks the attendance of individuals, typically in schools, colleges, or workplaces**.**

**Face Recognition Attendance System**: An automated system that uses facial recognition to mark and track attendance, eliminating the need for manual entry or traditional attendance methods.

**Identification** Identifies a person from a database of many faces

**Verification** Confirms if a face matches a specific stored template.

**3- NEED OF PROJECT**

In today's fast-paced and digitally-driven world, security and convenience have become paramount. Traditional security measures, such as passwords and security cards, have several limitations that make them less effective in safeguarding sensitive information and access control.

 **Efficiency**: Streamlines the attendance process, reducing manual effort and time consumption.

 **Accuracy**: Minimizes human errors associated with traditional methods like pen-and-paper or RFID.

 **Security**: Ensures that attendance is only recorded for the actual person, preventing proxy attendance.

 **Automation**: Facilitates a fully automated system, eliminating the need for attendance sheets or card swipes.

* 1. **- CURRENT SYSTEM AND ITS DRAWBACK**

Current systems often rely on traditional security measures like passwords or security cards, which can be easily forgotten, lost, or stolen. These methods are not foolproof and can be breached by unauthorized individuals.

 **Manual Attendance**: Attendance is taken by calling out names or marking manually on a register.

 **RFID Systems**: Uses cards that students/employees swipe in front of a sensor.

 **Biometric Systems**: Uses fingerprint or iris scanning for identification.

* **Manual Errors**: Human errors in recording attendance, leading to inaccurate records.
* **Time-Consuming**: Traditional methods can take up valuable time during classes or work hours.
* **Proxy Attendance**: In some systems, individuals can mark attendance on behalf of others.
* **Hygiene and Maintenance**: Biometric systems like fingerprints can require regular cleaning, and RFID cards can be lost or damaged.
  1. **- PROPOSED SYSTEM AND ITS FEATURE**

 **Face Recognition-Based**: Uses facial recognition technology to automatically identify and record individuals in attendance.

 **Real-Time Processing**: The system verifies the identity of individuals in real-time using a camera.

 **Integration with Databases**: The system integrates with the database to fetch user details and mark attendance automatically.

 **Cloud-Based**: Optionally stores attendance data securely in the cloud for easy access and analysis.

**Features of the Proposed System**

 **User-Friendly Interface**: Simple interface that requires minimal setup and management.

 **No Physical Contact**: Unlike fingerprint or RFID systems, there is no need for physical contact, ensuring hygiene.

 **Fast Processing**: Attendance is recorded in real-time with high accuracy.

 **Scalable**: Can handle large numbers of students or employees simultaneously.

 **Increased Security**: Ensures that only the correct person’s attendance is marked, preventing proxy attendance