Attendance System Using Facial Recognition

Observing the time-consuming roll calls in our college, we wanted an efficient solution. This led to the idea of automating attendance using facial recognition – a simple yet effective way to save time and improve the classroom experience for both teachers and students.

1. Project Overview

Traditional attendance systems are time-consuming and error-prone. This aim of this project is to automate attendance using facial recognition, providing a contactless, efficient solution. .

Objectives:

- Develop a user-friendly interface.
- Implement facial recognition for accurate identification.
- Store attendance records in a structured format
- Automate the attendance process seamlessly.

2. Technologies and Tools

- **Python**: Primary language due to its simplicity and extensive library support.
- **Tools**: Visual Studio Code, Git/GitHub, Camera.
- **Library**: **Tkinter**: For building the graphical user interface (GUI)
  OpenCV: For facial detection and recognition.
  Pillow: For image processing and handling.
  CSV: For storing attendance records.
  NumPy: For numerical computations.