



**International Islamic University Chittagong**

**Dept. of CSE**

**Project Proposal**

***On***

***CSE-4876***

Submitted To:

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## Project Name

### Smart Attendance System

## Project description

In this project, we will create a Smart Attendance system that will use a webcam to detect faces and record the attendance live in an excel sheet. Our project is all about making attendance easy and accurate using technology. We're creating a system that can automatically keep track of who's present in a class or meeting. This system uses a webcam to recognize faces and records attendance in a digital spreadsheet.

## Solution Approach

The project will be developed using the following approach:

**a. Face Detection:** We will employ OpenCV, a powerful computer vision library, to capture video frames from a webcam and detect faces within these frames. This step forms the basis for further processing.

**b. Facial Recognition:** For identifying individuals, we will utilize deep learning-based facial recognition models. The system will compare the detected faces against a database of known individuals, using libraries like Dlib or face\_recognition.

**c. Attendance Logging:** When a recognized face is detected, the system will timestamp the attendance and record it in an Excel sheet. Each row in the sheet will represent a specific date, and columns will correspond to individuals.

**d. User Interface:** We will create a user-friendly interface, possibly using Tkinter, to initiate and terminate attendance recording, view attendance reports, and manage the database of known individuals.

## Objectives

The main objectives of this project are as follows:

- Make taking attendance super easy and save time.
- Reduce mistakes by using face recognition technology.
- Keep track of who's there in real-time for teachers and organizers.
- Create a simple interface so anyone can use it.
- Help schools, businesses, and groups manage attendance better.

## Conclusion

In conclusion, the Smart Attendance System with Facial Recognition demonstrates the practical application of image processing in solving a common administrative challenge. By automating the attendance tracking process and incorporating facial recognition, our system provides a modern, efficient, and accurate solution for managing attendance.

**The End**