**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**MINI PROJECT PROPOSAL**

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**PROJECT TOPIC:**

**FACE DETECTION ATTENDANCE SYSTEM**

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## 1.1 - Problem Statement

## The old method for taking attendance is by calling the name or roll number of the student to record attendance. It was a time-consuming and less accurate process of marking attendance because as we know the data written in the paper can be lost or can be less accurate because students often mark each other's attendance proxy. As a result, to solve these problems and avoid errors, we suggest computerizing this process by providing a system that records and manages students’ attendance automatically without needing lecturers' interference.

## 1.2 - Aim of The Project

## I am going to make an Artificial Intelligence-based face recognition system that can have a high impact on different organizations. The uniqueness or independence of an individual is his face. By considering this fact my system will be super faster and accurate in marking the attendance of individual students. I am going to use face detection and recognition in this project. Face detection is used to locate the position of face region and face recognition is used for marking the attendance. The database will store the faces of students. when the face of the student matches with one of the faces stored in the database then the attendance is recorded.

## 1.3 - Specific Objectives

## Verification - a one-to-one matching of an unknown face alongside a claim of identity, to ascertain the face of the individual claiming to be the one on the image.

## ● Identification - which is also a one-to-one matching, given an input image of a face for an individual (unknown), to determine their identity by comparing the image against a database of images with known individuals.

## ● To help the lecturers, improve, and organize the process of tracking and managing student attendance.

## ● Provides a valuable attentive service for both teachers and students.

## ● Reduce manual process errors by providing automated and reliable attendance systems.

## ● Flexibility, lectures capability of editing attendance records.

## ● Reducing time losses as it is a very valuable resource.

## 1.4 - Project Scope

## The main intention of this project is to solve the issues encountered in the old attendance system while reproducing a brand new innovative smart system that can provide convenience to the institution. In this project, a website will be developed which is capable of recognizing the identity of each individual and eventually record down the data into a database system and will be able to provide visual access to the information. The followings are the project scopes:

## ● The targeted groups of the attendance monitoring system are the students and staff of an educational institution.

## ● Teachers should be able to register new accounts.

## ● The user’s face should be sensed and captured by the camera

## ● The database of the attendance management system can hold an individual’s information.

## ● The detected face’s data should be matched with the database

## ● The facial recognition process can only be done for one person at a time.