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**Problem Statement**

In today’s world, many schools use a manual spreadsheet software attendance to mark students in. Imagine the future, where such manual registers are scrapped, and pupils use their faces to mark themselves in. It is an added security because the pupil will obviously have to be present to mark themselves in using their face and prevent the teacher from accidently marking someone in, it is also a more efficient system where students can be authenticated and identified. Some schools, use school ID cards which have a similar idea but often students may forget or lose their ID cards, which wouldn’t happen with facial recognition. As a team, we therefore have decided to create a model for facial recognition. To complete this task, it is our ambition to create our own database which will contain various labelled images in which we can use supervised learning to test and train our solution. To make the project even higher quality, we have decided to create a simple user interface which the end-user be able to interact with to test our solution. This simple user interface will contain a section for uploading an image and a section for the output that the solution will provide to us determined by the model based on the image uploaded and the label it is given, if the images match a label, the student will be marked in as that label which would be their student ID and name.

**Problem Motivation**

This problem is an ethical debate although this is what the future is possibly going to be like. Therefore, it is important to complete this task ethically. The main motivation for this problem is from past experience where teachers have often mistakenly marked students in as they would’ve misheard an answer coming from someone saying “yes” when asking if they’re in or not. Such problem would be instantly erased through facial recognition. Also, teachers can often access their system and view everything about their students regarding their personal information when accessing the system to mark the attendance. The access this teacher would have would be limited as they wouldn’t have to access such system as much as the process would be automatic and therefore the teacher wouldn’t have to view anything. Teacher’s are trusted employees of the school yet it doesn’t mean that such confidential information about each student can be misused. As a result, it is a good idea to limit it where possible. Furthermore, there have been experiences where a chunk of the lesson time has been consumed by the teacher taking the attendance which can affect the students learning as it limits their promised time of doing so. Facial recognition would erase such problem and the lesson time given to the student will be lengthier and won’t affect the student’s education at all. The lesson time promised would be focused on the actual lesson than marking the attendance.

**Literature Review**

[**https://ieeexplore.ieee.org/document/9215441**](https://ieeexplore.ieee.org/document/9215441)