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**A TECHNICAL SEMINAR SYNOPSIS
ON**

“COMPUTER VISION”

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In
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ABSTRACT

This paper presents facial detection and emotion analysis software developed by and for secondary students and teachers. The goal is to provide a tool that reduces the time teachers spend taking attendance while also collecting data that improves teaching practices. Disturbing current trends regarding school shootings motivated the inclusion of emotion recognition so that teachers are able to better monitor students' emotional states over time. This will be accomplished by providing teachers with early warning notifications when a student significantly deviates in a negative way from their characteristic emotional profile. This project was designed to save teachers time, help teachers better address student mental health needs, and motivate students and teachers to learn more computer science, computer vision, and machine learning as they use and modify the code in their own classrooms. Important takeaways from initial test results are that increasing training images increases the accuracy of the recognition software, and the farther away a face is from the camera, the higher the chances are that the face will be incorrectly recognized.

INTRODUCTION

Computer vision is the field of science that deals with the automatic extraction, analysis, and understanding of useful information from a single image or a sequence of images analysis are some of the many features of computer vision and would help in addressing the issue of school security. This program will be able to send an early warning to the school's guidance counsellor if a student is showing prolonged signs of sadness or anger. Through these features, teachers may utilize face recognition to save time spent on current attendance methods and familiarize themselves and their students with computer vision and computer learning software. With this software providing motivation and a launching point, teachers can build curriculum and investigatory projects for students on Computer Vision and Machine Learning. Facial recognition and emotion analysis can help teachers monitor the changes in their student behaviours to increase productivity and student achievement.