3.2 Proposed System

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 behaviors to increase productivity and student achievement. Computer vision would enable schools to take attendance electronically with a facial recognition program. Not only will this save teachers precious time, it will also aid in educating teachers and their students about coding and the variety of applications possible with computer vision.

An emotion analysis program would give school faculty and staff more information on students and early warning of significant shifts in emotional state. Knowledge-based techniques (sometimes referred to as lexicon-based techniques), utilize domain knowledge and the semantic and syntactic characteristics of language in order to detect certain emotion types. In this approach, it is common to use knowledge-based resources during the emotion classification process such as WordNet, SenticNet, ConceptNet and EmotiNet, to name a few. One of the advantages of this approach is the accessibility and economy brought about by the large availability of such knowledge-based resources. A limitation of this technique on the other hand, is its inability to handle concept nuances and complex linguistic rules.