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CVS Check- Computer Vision Syndrome Prediction

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ABSTRACT

Computer vision Syndrome (CVS) refers to the harmful effects on the eyes and eyesight caused by continuous use of digital devices such as computers, smartphones, and tablets. These effects can cause discomfort, eyestrain, headaches, dry eyes, blurred vision, and other symptoms that can interfere with daily activities and reduce productivity. The increasing prevalence of digital devices and the widespread use of these devices for work, education, and leisure activities have made CVS a growing concern for individuals, organizations, and healthcare professionals. Thus, there is a need for effective solutions to prevent, manage, and treat CVS.

Through the use of a web camera, the computer will monitor attributes such as human eye behavior, emotions, head pose, eye blink count and iris position in order to maintain and alert the computer user while using a digital screen. When the computer detects signs of Computer Vision Syndrome, it will alert the user to take the necessary precautions, including taking a break, engaging in a specific form of exercise, and other actions depending on the person's health condition. Computer vision will be used to create this system, and a deep learning model like the convolutional neural network will be used. While the user is working on routine tasks, the system will be running in the background.

CVS Check will offer an innovative approach and new architecture that includes features like emotion, eye blink rate, head pose and iris position to detect Computer Vision Syndrome.

Keywords: Computer Vision, Deep Learning, Convolutional Neural Network, Image Processing,

Subject Descriptors: Image Processing >> Computing methodologies >> Artificial intelligence >> Computer vision >>