<YAFAP>

AIM: webcam-based heart rate recognition for medical research and emotion recognition

# Summary:

Human heart rate varies according to the condition of the body and mind of a person. Emotion recognition is an important tool in health and fitness. Human heart rate can be monitored using a webcam to monitor heartbeat. The stream from a webcam is converted to electronic pulses that can be analysed using a computer. The frequency, amplitude, and pattern of these electrical pulses are measured and interpreted by a bioinformatics system. A bioinformatics system is electronic medical equipment used in medical research to analyse heart rate data. Emotion recognition systems are also used in medical research and treatment.

Various health monitoring applications use webcam-based heartbeat monitoring. For example, doctors use it to detect excessive sweating or stress during surgery. It has also been used to monitor blood pressure in people with hypertension. Heart rate can also be used in sports as a physical measurement tool. Athletes use it to measure their pulse and regulate their heart rate before exercise. It's a new trend in health and fitness; hence, people are starting to adopt it in their daily lives.

This new software that can detect heart rate with a webcam could be used in medical research. Along with that, it can also be used to identify emotions and recognise people in real time.

This software would result in a bridge between humans and machines.

Salient features:

1. Even with 1 image of a person, the model can recognize him/her face.
2. Smooth face recognition accompanied with decent FPS.
3. Along with face recognition the per frame emotion classification is present in a graphical way.

# Snippets:





