

Stress Detection in IT Professionals by Image Processing and Machine Learning

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Abstract: Our project's primary goal is to identify signs of stress in IT professionals utilising sophisticated machine learning and image processing methods. Our system is an improved version of the old stress detection systems that excluded live detection and personal counselling, but this system includes live detection and periodic analysis of employees and detects physical and mental stress levels in him/her by providing them with suitable stress management techniques by providing survey form periodically. Our method primarily focuses on stress management, creating a healthy and spontaneous work atmosphere for the employees, and getting the best performance out of them during working hours. We used image processing techniques to extract several facial traits like wrinkles, eye bags, and brow strain. Then, we classified the photos as strained or not stressed using machine learning techniques to analyse these aspects. On a sample of IT workers, we tested our method, and we were able to identify stress with an accuracy of 89%. Our suggested method can be applied to real-world situations to identify stress in IT professionals and offer prompt treatments to enhance their productivity and wellbeing.

Keywords: Stress detection.

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