IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.53
Volume 4, Issue 3, October 2024

# Stress Detection in IT Professionals using Image Processing and Machine Learning

**Asha Shinde, Gayatri Adsure, Tanvi Borge, Prof. Naina Kokate Prof. Pallavi Bhaskare**
Department of Computer Engineering
Smt. Kashibai Navale College of Engineering, Pune, India

**Abstract:** *The growing needs of the IT enterprise often disclose experts to chronic stress, that could lead to burnout and reduced productiveness. This paper gives a system for real-time strain detection among IT specialists using the Logistic Regression technique. The proposed gadget leverages physiological statistics from wearable sensors, including heart charge, to screen pressure ranges non-invasively. Logistic Regression is used because the number one algorithm for classifying stress levels primarily based on the amassed information. Existing techniques, including surveys and facial popularity, are frequently invasive and unreliable for real-time packages. The proposed technique addresses these obstacles by means of providing a more scalable and green solution that may be seamlessly integrated into place of work environments. By allowing early detection and intervention, this machine no longer most effectively helps in coping with stress however additionally promotes mental well-being and complements productiveness. The paper indicates that the Logistic Regression-primarily based version may be tailored to be used in different high-strain industries, inclusive of healthcare and education, presenting broader programs for strain control.*

**Keywords:** Stress detection, IT professionals, Logistic Regression, wearable sensors, real-time monitoring, mental health, burnout prevention;


DOI: 10.48175/IJARSCT-19948