IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 9, May 2025
Impact Factor: 7.67

Human Stress Detection Based on Sleeping Habits Using Machine Learning Algorithm

Dr. Mirza Moiz Baig[1], Prof. Rohan Kokate[2], Pawan N Khirekar[3]
Head of Department, Information Technology, J.D. College of Engineering and Management, Nagpur, India [1]
Head of Department, Computer Application, J.D. College of Engineering and Management, Nagpur, India [2]
Computer Application, J.D. College of Engineering and Management, Nagpur, India [3]

Abstract: *This study explores the use of machine learning algorithms to detect human stress based on sleep patterns. Sleep is closely linked to mental health, and changes in sleep behaviour can indicate stress levels. By collecting data from wearable devices or sleep-tracking apps, key sleep parameters such as duration, quality, and sleep stages can be monitored. The study applies various machine learning techniques, including classification and regression models, to analyze the relationship between sleep patterns and stress levels. The objective is to develop a predictive model capable of identifying stress by examining deviations in sleep habits. Such a system can offer valuable insights for early intervention, enabling users to manage stress more effectively through personalized recommendations for improving sleep quality..*

Keywords: Flask, Web Based Application, Admin Dashboard, User Dashboard, Algorithm

DOI: 10.48175/IJARSCT-27020