

# A Deep Learning Approach to Assess the Stress Level and Disease Prediction in Human Beings

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**Abstract:** *In today's workforce, stress problems are a prevalent problem among IT professionals. Employees are more likely to experience stress as a result of shifting work cultures and lifestyles. Even if a lot of businesses and industries offer programs connected to mental health and attempt to improve the environment at work, the problem is still out of control. In this study, we aim to analyze stress patterns in working people and identify the elements that significantly influence stress levels by utilizing Deep Learning approaches and comparatively carried out between a deep Long Short-Term Memory (LSTM) network. According to our deep LSTM model reported with health, stress, and mood, respectively. Furthermore, we applied an LSTM-based fine-tuning transfer learning strategy that produced improved prediction accuracy for new participants, especially in situations with low data volumes.*

**Keywords:** Stress, Deep Learning Approaches, Long Short- Term Memory (LSTM) Network, Stress Levels