

Human Stress Detection using a User Dependent Model by Deploying Supervised Learning Techniques

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Abstract: *Stress is a natural response to challenges and hazards, but chronic stress can lead to various health problems. Managing emotions and time can help mitigate stress, and if it persists, coping mechanisms can be developed. Stress measurement has become increasingly important, and we propose a supervised learning-based model that gathers physiological data from users in various stress scenarios. Our machine learning model, which accurately categorizes a user's stress levels, is specific to each user. We evaluate our model's effectiveness using several supervised learning algorithms, and our research shows that our user-specific approach outperforms traditional user-independent models, with accuracy rates of up to 95% in stress classification. Personalized variables can significantly improve stress detection models, which can have important implications for developing personalized stress management solutions*

Keywords: Stress Detection, Deployment, Supervised Learning Techniques, Support Vector Machine Classifier, Decision Tree Classifier, Adaboost Classifier, MLP Classifier.