A Project Abstract

on

STRESS DETECTION IN STUDENTS USING MACHINE LEARNING

Submitted in partial fulfillment of the requirements

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in

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ABSTRACT

Stress is a critical factor affecting the mental health, academic performance, and overall well-being of students. With the increasing demands of education and extracurricular activities, the need for effective stress detection mechanisms has become more significant than ever. This project aims to develop an intelligent system for detecting stress levels in students using advanced data analytics, machine learning techniques, and physiological or behavioral indicators. The proposed system integrates data from multiple sources, such as heart rate, sleep patterns, voice tone, facial expressions, and self-reported surveys, to identify signs of stress. Machine learning algorithms, such as Random Forest, Support Vector Machines, or Neural Networks, are employed to classify stress levels into categories such as low, moderate, or high. The system provides real-time feedback and recommendations, including relaxation techniques, time management strategies, or professional counseling suggestions. The ultimate goal is to create a user-friendly application that empowers students, teachers, and parents to monitor stress levels and take proactive measures to improve mental health.

By fostering early detection and intervention, this project can play a vital role in reducing the long-term impact of stress and promoting a healthier and more productive learning environment.

Keywords: *Stress Detection, Machine learning, Classification algorithms.*

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