PULSE - Personalized Understanding, Learning and Working Stress Evaluation

Athanasios Anastasiou
Harokopio University of Athens, Kallithea, Greece

George Dimitrakopoulos
Harokopio University of Athens, Kallithea, Greece

Abstract

This study proposes the development of a comprehensive and non-intrusive system for the detection, monitoring, and management of stress in individuals operating in high-strain environments that demand both mental and physical exertion. The core of the intervention lies in the design of advanced algorithms and machine learning models capable of identifying work-related stress by analyzing data from multiple sources. In parallel, the initiative includes the development of digital educational programs aimed at enhancing stress awareness and management skills, delivered through interactive e-learning platforms. A specially designed mobile application will serve as the primary user interface, enabling real-time feedback and engagement with system components. The app will incorporate gamification elements and personalized interventions to encourage user participation and promote long-term stress management practices.