

## Atenza: Real-Time Attention & Focus Tracking using Webcam Micro-Expressions Concept

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### Abstract:

Atenza is an adaptive real-time focal and well-being assessment tool for healthy and sustainable studying and working behaviour. The tool analyses, with an average webcam, not only the fixation and blinking rates and head position but also micro-facial expressions, trying to forecast how much the subject's current level of focal ability or mental fatigue is. When initially introduced with Atenza, it has created a cognitive profile for each one of its users so as to distinguish between intuitive conduct and indicators that show either distractions or signs of underpinning and stressing conditions. The tool constantly calculates and receives, with gentle and situation-specific micro-notifications, for instance, stretching and resting notifications, as well as exercises for controlled breathing, indications in order to avoid burnout, which helps with balancing productivity levels for preventing burnout and prolongs screen times, and Atenza also promotes the United Nations Sustainable Development Goal (SDG) 3: Good Health and Well-Being.

### Keywords:

Attention Monitoring, Computer Vision, Focus Detection, Micro-Expressions, Eye Tracking, Gaze Analysis, Well-being Interventions, Real-Time Systems.