UCORE: Ubiquitous COmposite multi sensing and REsponsive meaningfulness multi contexts

DOI: https://doi.org/10.62658/COFAC/ILIND/HEI-LAB/1/2021

Project Reference: COFAC/ILIND/HEI-LAB/1/2021

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10/2021 – 03/23
Project Date

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1. HEI-Lab: Laboratórios Digitais de Ambientes e Interações Humanas

Abstract:

Technological evolution brought about new ways of modelling and capturing human behaviour. Digital environments, such as Virtual Reality (VR), can be adapted to incorporate therapists/researcher/participant's requirements and software and hardware can be used to monitor and record multiple sets of data on participant's performance and behaviour. Thus, technology seems to be mature enough to give birth to assessment and intervention frameworks that can replicate close to real settings that trigger human behaviour that can be recorded and studied via data from an extensive array of sources (psychophysiology, eye tracking, electroencephalography, emotion recognition, among many others). Merging rich multi contextual meaningfulness stimuli (i.e. VR) with composite multi sensing sets of data is UCORE key objective.

As such, UCORE unfolds all the way through several activities that comprehend designing and developing a multi sensing framework that will record, analyse, and integrate data from a network of measures. These data will be fed into a digital platform (i.e. VR) that will adapt accordingly, providing a contextual environment that moulds into participant's profile and performance. The complexity and novelty will be evaluated through experimental studies where several assessment measures available at HEI-Lab will be used.

UCORE takes on board a multidisciplinary team of researchers from psychology, video games and computer science, and counts with the participation of several postgrad and PhD students, and asks for a budget of €15k to hire developers and cover for the presentation of results at an international conference.