ABOUT US

The Software Quality and Human-Computer Interaction Laboratory is situated within the Computer Engineering and Informatics Department at the University of Patras.

The laboratory's focus is on research in software quality, encompassing processes, metrics, and tools, as well as on Human-Computer interaction, including interaction design, user-centered design, and usability evaluation.

The laboratory is actively participating in various EU funded research projects.

Software Quality and Human-Computer Interaction Laboratory

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Eye Tracking in VR

Our lab explores the integration of eye-tracking in virtual reality (VR) to enhance user interaction, performance analysis, and adaptive system design.

By capturing real-time gaze data, we gain valuable insights into attention patterns, cognitive load, and decision-making processes within immersive environments.

Usability Evaluation

By leveraging real-time eye-tracking data, we focus on usablity evaluation, measuring cognitive load, reading flow, and overall engagement. By prioritizing user experience, we advance the development of assistive technologies that enhance learning while maintaining a natural and immersive interaction.

AI

We apply AI-based methods to real-time eye-tracking data, using neural networks to model user behavior and adjust system responses. We predict gaze trajectories, distinguishing voluntary from involuntary blinks, and forecasting reading comprehension, enabling more precise and data-driven adaptations for user interaction.

EYE TRACKING

Selected Publications:
- Screen Reading Regions in Social Media Comments: An Eye-Tracking Analysis of Visual Attention on Smartphones
DOI: 10.1145/3635059.3635074
- Users' Opinions When Drawing with an Eye Tracker
DOI: 10.1007/978-3-031-35681-0_28

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