Adaptive Feedback to Improve Virtual Reality Interface

Published date: May 3, 2018

Technology description

Market Opportunity

Virtual reality (VR) is a burgeoning industry projected to be worth $48.5 billion by 2025 and has many promising applications in various fields ranging from sports training to surgical simulation. As VR becomes increasing utilized for instruction, current VR experiences lack adaptive feedback mechanisms to allow personalized experiences tailored to the user's skill level or ability. Dynamic feedback has been shown to improve engagement and retention of new knowledge.

USC Solution

USC researchers have developed a new VR interface that can simultaneously evaluate user performance and adjust task difficulty accordingly. Through collection of user input and feedback data measuring various parameters like reaction time and movement adaptation, the interface can track changes in cognitive ability and neuroplasticity. The interface can be used for improving athletic training, physical rehabilitation of Parkinson’ s and stroke patients, and evaluation of neurological abilities.

Application area

Improving user experience on virtual reality platforms

Advantages

VR interface adjusts to personalize user experience
Adaptive feedback improves skill retention and progression

Institution

University of Southern California

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