

Leveraging Mobile Technologies to Translate and Enhance Cognitive Measurement and Training to Achieve Real World Learning Outcomes

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Abstract: Advancements in consumer technologies provide new opportunities to translate research outside of laboratory settings to better understand how people function in their environmental settings and to intervene to teach skills that can help individuals better achieve their goals. For example, in an ideal case, in the context of cognitive training, an individual could download a program on their smart phone that would use advanced machine learning approaches to estimate their cognitive strengths and weaknesses and prescribe an individualized intervention program that would result in improvements on skills that meaningfully benefit that individual. While there are currently numerous companies promising such, most existing solutions are limited and fail to meet these goals. In this talk, I'll review research that we are doing at the University of California, Riverside Brain Game Center for Mental Fitness and Well-being (BGC). The BGC is a unique lab where we engage students and research across the University (from Psychology, Art, Music, and Computer Science to Education and Medicine) to develop ambulatory technologies to measure and to train cognitive functions with the goal of achieving real world learning outcomes.



Bio: Professor Aaron Seitz is an internationally recognized expert on the mechanisms of learning and memory using behavioral, computational and neuroscientific methodologies. A key aspect of his recent research is applying knowledge of plasticity mechanisms in the brain to new ambulatory tools to better measure and train perceptual and cognitive processes, with a focus on those that are effective in improving performance in real-world tasks. He is a Professor of Psychology at UC Riverside and the Director of the UC Riverside Brain Game Center for Mental Fitness and Wellbeing (<http://bgc.ucr.edu>)