Interdisciplinary Data Sciences Consortium

* IDSC Seminar Series *

September 21, 2017 2:00pm-3:00pm

Location: ENB 313

Presents

Dr. Marvin Andujar,
Computer Science & Engineering
College of Engineering

Title: Quantifying the Human Brain During Human-Computer Interaction with a Brain-Computer Interface

Abstract: The brain is known as the ultimate frontier because of its complexity and undiscovered characteristics. Recently, in computing, there is an interest to study human's behavior from the brain while they interact with user interfaces or machines to provide feedback to the user. Also, to explore how to decode the interaction of brain's neurons synapses for quantification. In this talk, we show different methods of quantifying the human brain through brain imagining apparatus and approaches. We demonstrate that is possible to effectively measure the user's affective state from the brain while they interact with machines and can provide different types of visualizations for further discovery. This work contributes towards helping users to be more aware of their performance while they perform daily tasks. It also contributes towards understanding the human behavior patterns and variability in different situations by using Brain-Computer Interfaces.

Biography: Dr. Marvin Andujar is an Assistant Professor in the Department of Computer Science and Engineering at the University of South Florida. He received his PhD in Human-Centered Computing from University of Florida. During his Ph.D. studies, Dr. Andujar was recognized as a National Science Foundation Graduate Research Fellow, a GEM Fellow, a Generation's Google Scholar, and an Intel Scholar. His research concentration is on Affective Brain-Computer Interfaces where he focuses on measuring and decoding the user's affective state from the brain during human-machine interaction. His dissertation work focused on measuring the effectiveness of quantified-self attention feedback from the brain towards user's attention improvement. Dr. Andujar was the researcher who started the Brain-Computer Interface initiative in the Computer & Information Science & Engineering Department at the University of Florida. His effort led towards obtaining external funding of $300,000 from the CEO of Intel along with his colleagues, and co-founded the world's first Brain-Drone Race. The race was showcased in more than 550 news outlets including New York Times, Associated Press, Discovery Channel, and the Verge, and Engadget.

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