Stony Brook University

Biomedical Informatics Grand Rounds

Klaus Mueller, PhD; Professor, Department of Computer Science, Stony Brook University

Explainable AI

Wednesday, October 31, 2018 3pm—4pm

BMI Conference Room HSC-L3 Room 045

Abstract

Fueled by high performance computing architectures and our ability to capture and store massive amounts of data we are currently experiencing a renaissance of artificial intelligence. Soon we will reach autonomous systems that can make complex decisions and execute them completely on their own. The crucial question however is, are we ready to place our fate and trust into the hands of these robotic systems? At this point, most if not all of these systems are black boxes. We might trust them with accomplishing low-risk tasks, like placing an online ad, but certainly not with high stakes decisions in finance, medicine, business, and so on. This realization has led to a new research trend, Explainable AI, in which machine-learning techniques are augmented such that they are able to produce more human-explainable models. A key part of these are dedicated visual human computer interface techniques that are capable of translating models into understandable and effective explanations. In this talk I will present some of my research that falls into this general area, applied to several domains, such as casual reasoning, deep learning, cluster analysis, and others.

BIO:

Klaus Mueller received a PhD in computer science from The Ohio State University and is currently a professor of computer science at Stony Brook University. His research interests are data science, visual analytics, HCI, and medical imaging. He won the NSF CAREER award in 2001, the SUNY Chancellor Award for Excellence in Scholarship and Creative Activity in 2011, and the Meritorious Service Certificate of the IEEE Computer Society in 2016. He has authored over 200 peer reviewed articles which have been cited more than 8,500 times. He was the chair of the IEEE Visualization and Computer Graphics Technical Committee from 2012-2105 and is the incoming Editor-in-Chief of IEEE Transactions on Visualization and Computer Graphics. Finally, he is also Founder, President and CEO of a small NSF-funded start-up company, Akai Kaeru LLC. For more info see http://www.cs.sunysb.edu/~mueller/

CME CREDIT AVAILABLE

Questions? Please call the Biomedical Informatics Department at 631-638-2590.