Dr. Lawrence Hall
Distinguished Lecture Series

Learning to Simulate Future Activity on Social Networks

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12:00 – 1:00 P.M.
Engineering East – EE-106
SeaTech (Videoconference) – ST-259

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ABSTRACT

Activity on social networks like Twitter can have a, sometimes significant, effect on real world events. Simulating future activity on social network platforms may provide useful insights into real world activity, which in turn drives social network activity. We discuss using machine learning to simulate future activity on several social networks, including Twitter and YouTube. How to determine which user does what future activity via simulation is addressed. An analysis of the best ways to measure performance such as via Arima or normalized root mean squared error will be covered. It is notably difficult to predict activity spikes on social networks and exogenous data is shown to be helpful in some cases. We will argue that history tends to repeat itself on social networks. Real world examples will be covered with the many challenges of simulating (far into) the future on social networks covered, as well as some successes.

BIOGRAPHICAL SKETCH

LAWRENCE O. HALL is a Distinguished University Professor in the Department of Computer Science and Engineering at University of South Florida and the co-Director of the Institute for Artificial Intelligence + X. He is the 2021-2 IEEE Vice President for Publications, Products and Services. He received his Ph.D. in Computer Science from the Florida State University in 1986 and a B.S. in Applied Mathematics from the Florida Institute of Technology in 1980. He is a fellow of the IEEE. He is a fellow of the AAAS, AIMBE and IAPR. He received the Norbert Wiener award in 2012, the Joseph Wohl award in 2017 from the IEEE SMC Society, the 2021 Fuzzy Pioneer Award from the IEEE Computational Intelligence Society. He is a past President of the IEEE Systems, Man and Cybernetics Society, former EIC of what is now the IEEE Transactions on Cybernetics. He is on the editorial boards of the Proceedings of the IEEE and IEEE Spectrum. His research interests lie in learning from big data, distributed machine learning, medical image understanding, bioinformatics, pattern recognition, modeling imprecision in decision making, and integrating AI into image processing. He continues to explore un and semi-supervised learning using scalable fuzzy approaches. He has authored or co-authored over 100 publications in journals, as well as many conference papers and book chapters. He has received over $6M in research funding from agencies such as the National Science Foundation, National Institutes of Health, Department of Energy, DARPA, and NASA.