CRML Distinguished Lecture Series:

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Intelligibility Throughout the Machine Learning Life Cycle

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Abstract: People play a central role in the machine learning life cycle. Consequently, building machine learning systems that are reliable, trustworthy, and fair requires that relevant stakeholders—including developers, users, and the people affected by these systems—have at least a basic understanding of how they work. Yet what makes a system "intelligible" is difficult to pin down. Intelligibility is a fundamentally human-centered concept that lacks a one-size-fits-all solution. I will explore the importance of evaluating methods for achieving intelligibility in context with relevant stakeholders, ways of empirically testing whether intelligibility techniques achieve their goals, and why we should expand our concept of intelligibility beyond machine learning models to other aspects of machine learning systems, such as datasets and performance metrics.

Biography: Jenn Wortman Vaughan is a Senior Principal Researcher at Microsoft Research, New York City. Her research background is in machine learning and algorithmic economics. She is especially interested in the interaction between people and AI, and has often studied this interaction in the context of prediction markets and other crowdsourcing systems. In recent years, she has turned her attention to human-centered approaches to transparency, interpretability, and fairness in machine learning as part of MSR's FATE group and co-chair of Microsoft's Aether Working Group on Transparency. Jenn came to MSR in 2012 from UCLA, where she was an assistant professor in the computer science department. She completed her Ph.D. at the University of Pennsylvania in 2009, and subsequently spent a year as a Computing Innovation Fellow at Harvard. She is the recipient of Penn's 2009 Rubinoff dissertation award for innovative applications of computer technology, a National Science Foundation CAREER award, a Presidential Early Career Award for Scientists and Engineers (PECASE), and a handful of best paper awards. In her "spare" time, Jenn is involved in a variety of efforts to provide support for women in computer science; most notably, she co-founded the Annual Workshop for Women in Machine Learning, which has been held each year since 2006.