TEXAS A&M Institute of Data Science

Texas A&M Institute of Data Science Seminar Series

Leveraging Online Labor Markets to Learn from Imperfect and Biased Humans

An important pillar of Human-AI collaboration corresponds to supervised learning from costly and imperfect human label, when human intelligence is necessary to determine the correct labels. For example, human intelligence is necessary to label images and textual content from which to predict elements in images and to detect hate speech in text. Online labor markets have emerged as powerful platforms for large-scale labeling; however, significant challenges remain for these opportunities to materialize. Acquiring human labels has become a major bottleneck for machine learning. In some domains, a large number of labeled training data are required to achieve good predictive performance, and different payments offered to crowd labelers may yield different labeling quality: field experiments have found that different trade-offs between the cost and quality of labeling can arise at different domains. Human labeling is also inherently noisy -- it can exhibit a variety of different kinds of noise and biases. In this talk the speaker will provide an overview of her recent work on cost-effective selection of labeling payments to offer in online labor markets so as to learn most accurately from noisy and biased labeled for a given labeling budget. The speaker will present work in which she and co-authors developed effective and robust methods for dealing with this challenge, and present results suggestion that our frameworks yield state of the art performance.

Maytal Saar-Tsechansky,Ph.D.

Mary John and Ralph Spence Professor
University of Texas at Austin

Date: Monday, November 15, 2021
Time: 1:50 – 2:40 p.m. US Central Time
Zoom Meeting ID: 998 4499 3279
Passcode: 724615
Faculty host: Yu Ding, TAMIDS

Biography

Dr. Maytal Saar-Tsechansky is a Professor at the McCombs School of Business, and a co-founder of Sweetch, a mobile health startup firm. Her research focuses on developing Machine Learning (ML) and Artificial Intelligence (AI) methods to improve decision-making and to benefit people, organizations, and society. Her recent work focuses on human-AI integration and collaboration, and the overarching goal of my work is to augment ML & AI by bringing to bear the goals they are used to benefit in the real-world and the contexts in which learning itself occurs, accounting for the constraints and taking advantage of the opportunities in these environments. Dr. Saar-Tsechansky's research integrates decision-making, machine learning and AI, and she has addressed challenges in wide variety of domains, including health care, smart electricity grid, fraud detection, finance, and emerging forms of work, involving the integration of AI and humans to improve machine learning and decision-making. Her research has been published in business and computer science venues, including the Journal of Finance, Management Science, Information Systems Research, Journal of Machine Learning Research, and Machine Learning Journal, among other venues. Her work has been supported by both government and industry, including the National Science Foundation and the Israeli Science Ministry.

You can also click this link to join the seminar https://tamu.zoom.us/j/99844993279?pwd=TkJodWFVRURyMmkwakI4SWZGeVJTQT09

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For more information about TAMIDS seminar series, please contact Ms. Jennifer South at jsouth@tamu.edu