



TEXAS A&M
Institute of
Data Science

Texas A&M Institute of Data Science Seminar Series

Stop Explaining Black Box Machine Learning Models for High Stakes Decisions and use Interpretable Models Instead



With widespread use of machine learning, there have been serious societal consequences from using black box models for high-stakes decisions, including flawed bail and parole decisions in criminal justice. Explanations for black box models are not reliable, and can be misleading. If we use interpretable machine learning models, they come with their own explanations, which are faithful to what the model actually computes. The speaker will give several reasons why we should use interpretable models, the most compelling of which is that for high stakes decisions, interpretable models do not seem to lose accuracy over black boxes – in fact, the opposite is true, where when we understand what the models are doing, we can troubleshoot them to ultimately gain accuracy. The speaker will discuss work based on the four papers [[1](#), [2](#), [3](#), [4](#)].

Cynthia Rudin, Ph.D.

Professor of Computer Science,
Electrical and Computer Engineering,
and Statistical Science
Duke University

Date: Friday, January 29, 2021

Time: 1:00 – 2:00 p.m. US Central Time

Zoom Meeting ID: 998 4499 3279

Passcode: 724615

Faculty host: Yu Ding, TAMIDS

Biography

Cynthia Rudin is a professor of computer science, electrical and computer engineering, and statistical science at Duke University, and directs the Prediction Analysis Lab, whose main focus is in interpretable machine learning. She is also an associate director of the Statistical and Applied Mathematical Sciences Institute (SAMSI). Previously, Prof. Rudin held positions at MIT, Columbia, and NYU. She holds an undergraduate degree from the University at Buffalo, and a PhD from Princeton University. She is a three-time winner of the INFORMS Innovative Applications in Analytics Award, was named as one of the "Top 40 Under 40" by Poets and Quants in 2015, and was named by Businessinsider.com as one of the 12 most impressive professors at MIT in 2015. She is a fellow of the American Statistical Association and a fellow of the Institute of Mathematical Statistics.

You can also click this link to join the seminar <https://tamu.zoom.us/j/99844993279?pwd=TkJodWFVRURyMmkwakl4SWZGeVJTQT09>



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