Data Science Seminar

Hosted by the Department of Mathematics and Statistics

- Date: Tuesday, January 23, 2024
- Time: 12:00pm – 1:00pm
- Room: Whitney Hall 100E
- Speaker: Yili Zhang (MathWorks)
- Title: Low-Code Machine Learning in SIMULINK & MATLAB APPS.

Abstract

As AI being more and more applied in both the day-to-day hardware and the cutting-edge research, how could the hardware engineers deploy the AI model easily into their embedded systems without having to learn all the irrelevant nitty-gritty details? How can we make sure the researchers and the scientists have the flexibility to generate their AI models pertinent to their specific research while still being able to focus on their domain knowledge? In this presentation, those situations will be addressed by introducing one of MathWorks' AI platforms, the Statistics & Machine Learning Toolbox (SMLT), which provides functions and apps to describe, analyze, and model data. Specifically, the Simulink feature in the toolbox allows seamless integration with various model-based design workflows, and the generated code from those Simulink blocks is generic and library-free so it can be deployed to a wide range of embedded devices. Depending on users' application, the MATLAB APPS feature allows low-code or no-code handling on ML workflow steps such as model selection & training, feature selection, hyperparameter tuning, and deployment.

Biography of the speaker: Yili is currently a Machine Learning Software Engineer at the MathWorks based in Boston. Yili has a B.A. in Mechanical Engineering from Oregon State University and double M.A.s in Mechanical Engineering and Statistics from Utah State University. With widespread interests in research and engineering, Yili worked on robotics sponsored by Boeing, Inc, AI-based surrogate modeling sponsored by NuScale, Inc, and Quantum rating sponsored by S&P Global Ratings. Yili's work had been published in journals including ASME, Applied Energy and ICSR, and she also published two pending patent in Quantum rating. Yili Joined MathWorks in 2022 and started to focus on areas of Machine Learning, Model-based design and Code Generation.