Idaho State University

Mathematics and Statistics

Colloquium

A.I. Techniques for Predicting Adverse Side Effects of Drugs

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Several A.I. models have been applied to three distinct side effect datasets: SIDER, OFFSIDERS, and FAERS. Our study demonstrates that graph convolution network with a multi-layer perceptron (GCNMLP) surpasses the non-negative matrix factorization method (NMF) and several other established machine-learning techniques across various evaluation metrics. Furthermore, GCNMLP is effective in identifying new drug side effects.

Dr. Shih has held several prominent positions at National Chung Hsing University in Taichung, Taiwan, including Vice President, Dean of the College of Science, Director of the Big Data Center, and Chair of AI & Data Science. He is currently a Distinguished Professor at NCHU and serves as the Executive Director of both the Taiwan Society for Industrial and Applied Mathematics and the Mathematics Society of Taiwan. Dr. Shih's previous experience includes roles at Medical Optical Imaging Inc. in Charlotte, North Carolina (1998-2000) and the Aviation Weather Center/NWS/NOAA in Kansas City, Missouri (2000-2003). His research interests are focused on numerical computation and mathematical modeling related to imaging processes and data analysis.

Tues., October 1

3:45 pm

PS 307

For colloquium guests, refreshments begin at 3:15 pm in PS 307

Zoom Meeting ID: 893 9607 9478