Program: 2022 INFORMS Workshop on Data Science
https://blogs.ubc.ca/datascience2022/
Saturday, October 15, 2022
All sessions will be held live in person
Location: Indiana Convention Center (Floor Plan)

All times Eastern Daylight Time (EDT)

7:00-17:00	**INFORMS Registration Desk Open (Location: TBD)**		
7:30-8:30	**Breakfast (Co-Located with INFORMS DMDA; Wabash 2 & 3)**		
8:30-9:30	**Keynote speech** (Moderator: TBD) **Keynote Speaker (Co-Located with INFORMS DMDA;Wabash 2 & 3)** Cynthia Rudin (Earl D. McLean, Jr. Professor of Computer Science, Electrical and Computer Engineering, Statistical Science, Mathematics, and Biostatistics & Bioinformatics, Duke University) **Talk Title:** Interpretable Machine Learning: Bringing Data Science out of the "Dark Age"		
9:30-9:40	**Break**		

	Paper Session A Facilitator: Volunteer TBD	**Paper Session B Facilitator: Volunteer TBD**	**Paper Session C Facilitator: Volunteer TBD**
	Room Number: Wabash 1	**Room Number: 122**	**Room Number: 123**
	Session 1A: Human-AI Interaction	**Session 1B: Data Science Methods I**	**Session 1C: Video & Social Media Analytics**
9:40-11:10	Active Incentive Learning with Imperfect and Biased Humans *Ruijiang Gao (University of Texas at Austin)*; Maytal Saar-Tschansky (University of Texas at Austin)*	Safe Data Collection for Offline and Online Policy Learning *Ruihao Zhu (Cornell University)**	Market Value with CEO Interview Videos on YouTube *Cuibing Wu (University of Massachusetts Lowell)*; Julie zhang ("University of Massachusetts, Lowell")*
	Robots Serve Humans? Understanding the Economic and Societal Impacts of AI Robots in the Service Industry *Myunghwan Lee (University of British Columbia)*; Gene Moo Lee (University of British Columbia); Donghyuk Shin (Arizona State University); Sang Pil Han (Arizona State University)*	EnsembleIV: Creating Instrumental Variables from Ensemble Learners for Robust Statistical Inference **(Best Complete Paper Nominee)** *Gordon Burtch (Boston University); Edward McFowland III (Harvard University); Mochen Yang (University of Minnesota)*; Gediminas Adomavicius (University of Minnesota)*	Graph Representation Learning for Reciprocal Recommendation in IT-enabled Social Networks: Social Relations Model Approach *Buomsoo (Raymond) Kim (University of Arizona)*; Kyuhan Lee (Arizona State University); Donghoon Shin (Arizona State University); Sang Pil Han (Arizona State University); Sudha Ram (University of Arizona)*
	Leveraging Algorithm Discretion in AI-Advised Teams *Nicholas Wolczynski (UT Austin)*; Tong Wang (University of Iowa); Maytal Saar-Tschansky (University of Texas at Austin)*	Graph-based Extreme Feature Selection for Multi-class Classification Tasks *Neta Rabin (Tel-Aviv University)*; Gonen Singer (Bar-Ilan University); Shir Friedman (Tel-Aviv University); Omer Hedvat (Tel-Aviv University); Chen Ben-*	Diamond in the Rough? Detecting and Summarizing Product Defects from Online User Generated Contents **(Best Complete Paper Nominee)** *Xuan Zhang (Sam's Club Technology); Zhilei Qiao (The University of Alabama at Birmingham); Natasha Zhang Foutz (University of*
	Robust Human-AI Collaboration with Bandit Feedback *Ruijiang Gao (University of Texas at Austin)*; Maytal Saar-Tschansky (University of Texas at Austin); Maria De-Arteaga (University of Texas at Austin); Ligong Han (Rutgers, The State University of New Jersey); Min Kyung Lee (UT Austin); Wei Sun (IBM Research); Matthew Lease (University of Texas Austin)*	An Ensemble Selective Multi-generator Generative Adversarial Imputation Network (ESM-GAIN) Approach for Missing Data Imputation *Yuxuan Li (Oklahoma State University); Chenang Liu (Oklahoma State University)**	How Does AI-Generated Voice Affect Online Video Creation? Evidence from TikTok *Xiaoke Zhang (University of British Columbia)*; Mi Zhou (University of British Columbia); Gene Moo Lee (University of British Columbia); Andrea Ramazzina (Ensemble data); Francesco Cognolato (Ensemble Data)*
	Digital Rule of Thumb: A Natural Experiment on Autocomplete in Search Engines *Kitae Kim (KAIST College of Business)*; Dongwon Lee (HKUST); Sung-Hyuk Park (KAIST College of Business); Jaeung Sim (KAIST College of Business)*	CoNeCo: Combining Negative Control Outcomes for Bias Correction in Causal Inference *Yuanyang Liu (University of Tennessee)*; Emre Demirkaya (University of Tennessee); Wei Zheng (University of Tennessee)*	Using the Social Network Structure of Influencers to Understand and Predict User Engagement *Pankhuri Malhotra (University of Oklahoma)*; Remi Daviet (University of Wisconsin Madison)*
11:10-11:30	**Break and Network (Co-Located with INFORMS DMDA; Wabash 2 & 3)**		
	Session 2A: AI & Mental Health	**Session 2B: Data Science Methods II**	**Session 2C: AI Recruiting & HR**
11:30-12:30	Care for the Mind Amid Chronic Diseases: An Interpretable AI Approach Using IoT **(Best Complete Paper Nominee)** *Jiaheng Xie (Lerner College of Business and Economics, University of Delaware)*; Xiaohang Zhao (Shanghai University of Finance and Economics); Xiang Liu (University of Delaware); Xiao Fang (Lerner College of Business and Economics, University of Delaware)*	Non-stationary spatio-temporal point process modeling for high-resolution COVID-19 data *Zheng Dong (Georgia Institute of Technology)*; Shixiang Zhu (Georgia Institute of Technology); Yao Xie (Georgia Tech); Jorge Mateu (Universitat Jaume I); Francisco J Rodriguez Cortes (Universidad Nacional de Colombia)*	A Framework for Automated Worker Evaluation based on Free-Text Responses with No Ground Truth *Tomer Geva (Tel Aviv University)*; Anat Goldstein (Ariel University); Inbal Yahav (Tel Aviv University)*
	Depression Detection in Social Media Using Time-and-knowledge-aware LSTM and Depression Diagnosis-related Entity Extraction *Wenli Zhang (Iowa State University)*; Jiaheng Xie (Lerner College of Business and Economics, University of Delaware); Xiang Liu (University of Delaware); Zhu (Drew) Zhang (ISU)*	Explainable Itemset Recommendations with Topic Modeling and Word Embeddings *Sambit Tripathi (University of Massachusettes Lowell)*; Xiaobai Li (University of Massachusetts Lowell); Amit Deokar (University of Massachusetts Lowell)*	Acqui-hiring or Acqui-quitting: Data-Driven Post-M&A Turnover Prediction via a Dual-fit Model *Denghui Zhang (Rutgers University)*; Hao Zhong (ESCP Business School); Jingyuan Yang (George Mason University)*
	Detecting the Human Behaviors Associated with Depression via Sensor Signal Analysis: An Agreement-based Self-Attention Deep Learning Approach **(Best Student Paper Nominee)** *Aijia Yuan (Indiana University)*; Hongyi Zhu (University of Texas at San Antonio); Edlin Garcia (Indiana University); Sagar Samtani (Indiana University)*	Multi-Resolution Spatio-Temporal Prediction with Application to Wind Power Generation *Shixiang Zhu (Georgia Institute of Technology)*; Hanyu Zhang (Georgia Institute of Technology); Yao Xie (Georgia Tech); Pascal Van Hentenryck (Georgia Institute of Technology)*	Towards a Better Characterization of Career Paths: Sequential Job Embedding and Mixture Markov Models *Hao Zhong (ESCP Business School)*; Chuanren Liu (The University of Tennessee Knoxville)*
	An ALBERT-based TextCNN-Hatt hybrid model enhanced with topic features for sentiment analysis of sudden disasters *Xinsheng Zhang (Xi'an University of Architecture and Technology)*; Yu Long Ma (Xi'an University of Architecture & Technology)*	A Multilabel Graph Attention-based Method to Predict Deterioration Paths for Chronic Hepatitis B Patients *Zejian Wu (University of Utah); Da Xu (California State University Long Beach)*; Paul Hu (University of Utah); Ting-Shuo Huang (Keelung Chang Gung Memorial Hospital)*	A Tale of Two Tasks: Implications of Task Definition on the Fairness of Machine Learning *Heng Xu (American University)*; Nan Zhang (University of Florida)*
12:30-13:30	**Lunch break (Co-Located with INFORMS DMDA; Wabash 2 & 3)**		
	Session 3A: Firm Innovation	**Session 3B: Data Science Methods III**	**Session 3C: Optimization for Business Analytics**
13:30-14:30	Discovery of Technological Innovation Systems: Implications for Predicting Future Innovation **(Best Student Paper Nominee)** *Junho Yoon (University of Iowa)*; Gautam Pant (University of Illinois Urbana-Champaign); Shagun Pant (University of Illinois Urbana-Champaign)*	Finite-Sample Analysis of Decentralized Q-Learning for Stochastic Games *Zuguang Gao (University of Chicago Booth School of Business)*; Qianqian Ma (Boston University); Tamer Basar (University of Illinois at Urbana-Champaign); John Birge (University of Chicago Booth School of Business)*	Finding an Optimal Approval Strategy in Credit Scoring System Using Genetic Algorithm *Hyunwoo Roh (Peoplefund)*; Michael Kim (Peoplefund); Seungwoo Jung (peoplefund)*
	When is Freemium Strategy Effective? The Role of Agency-Communion Orientations *Haowen Deng (Fudan University); Jingjing Li (University of Virginia)*; Natasha Z Foutz (University of Virginia); Cheng Zhang (Fudan University)*	Fast Multi-Dimensional Subset Scan With Sparse Tensor Decomposition For Pattern Detection **(Best Student Paper Nominee)** *Sriram Somanchi (Notre Dame)*; Haorui Guo (New York University); Skyler D Speakman (IBM Research); Girmaw Abebe Tadesse (IBM); Daniel B Neill (New York University)*	Optimal Unit Locations in Emergency Service Systems with Bayesian Optimization *Wenqian Xing (Columbia University)*; Cheng Hua (Shanghai Jiao Tong University)*
	Ideas are Easy but Execution is Everything: Measuring the Impact of Stated AI Strategies and Capability on Firm Innovation Performance *Myunghwan Lee (University of British Columbia)*; Gene Moo Lee (University of British Columbia)*	SMRT: A Structural Model of Latent Ratings and Topics in Text *Desheng Ma (Cornell University)*; Shawn Mankad (Cornell University)*	Risk-Aware Linear Bandits with Application in Smart Order Routing *Jingwei Ji (University of Southern California)*; Renyuan Xu (University of Southern California); Ruihao Zhu (Cornell University)*
	AlphaVC: A Reinforcement Learning-based Venture Capital Investment Strategy *Zixuan Yuan (Rutgers University)*; Denghui Zhang (Rutgers University); Hao Zhong (ESCP Business School); SHENGMING ZHANG (Rutgers University); Hui Xiong (the State University of New Jersey)*		A Proximal Algorithm for Sampling from Non-smooth Potentials *Jiaming Liang (Yale University)**
14:30-14:50	**Break and Network (Co-Located with INFORMS DMDA; Wabash 2 & 3)**		
14:50-15:15	**INFORMS Workshop on Data Science Awards Ceremony (Wabash 1)**		
	Session 4A: Healthcare (Short Presentations)	**Session 4B: Data Science Methods IV (Short Presentations)**	**Session 4C: Graph Analytics (Short Presentations)**
15:15-15:45	Government-generated Health Content and User Participation: Evidence from COVID-19 **(Best Short Paper Nominee)** *Lijia Ma (University of Washington)*; Xue Tan (Indiana University); Yingfei Wang (University of Washington); Yong Tan (University of Washington)*	A Machine Learning-based Framework towards Assessment of Labelers' Biases *Wanxue Dong (University of Texas at Austin)*; Maria De-Arteaga (University of Texas at Austin); Maytal Saar-Tschansky (University of Texas at Austin)*	Learning to Hash Information Network Through MaxCut Formulation **(Best Short Paper Nominee)** *Yeshuai He (The University of Arizona)*; Yong Ge (University of Arizona); Jianqiang Cheng (University of Arizona)*
	Assessing Bias and Fairness in YouTube Videos on Healthcare: Analytics using Face and Speech Recognition Methods *Krishna P Pothugunta (Michigan State University)*; Xiao Liu (Arizona State University); Anjana Susarla (Michigan State University); Rema Padman (Carnegie Mellon University)*	Content Co-Production and the Influence on Follower Growth *Xinxue (Shawn) Qu (University of Notre Dame); Sophie Zhai (University of Oklahoma)**	User Profiling and Vulnerability Introduction Prediction in Social Coding Repositories: A Dynamic Graph Embedding Approach *Agrim Sachdeva (Indiana University)*; Ben U Lazarine (Indiana University); Sagar Samtani (Indiana University); Hongyi Zhu (University of Texas at San Antonio)*
	Predicting Sepsis Mortality using Machine Learning *Ameera Ibrahim (Saint Mary's College of California)*; Ahmed Ahmadein (Saint Mary's College of California)*	Real-Time Purchase Prediction Using Retail Video Analytics *Rubing Li (New York University)*; Beibei Li (Carnegie Mellon University); Anindya Ghose (New York University); Kaiquan Xu (Nanjing University)*	A Graph-based Method for Job Title Clustering *Lun Li (stevens institute of technology)*; Theodoros Lappas (Stevens Institute of Technology); Rong Liu (Stevens Institute of Technology)*
		Improving Human Decision-Making with Machine Learning *Hamsa Bastani (Wharton); Osbert Bastani (University of Pennsylvania); Wichinpong Park Sinchaisri (University of California Berkeley)*	Identifying Linked Repositories on GitHub: A Self-Supervised Graph Embedding Approach *Ben U Lazarine (Indiana University)*; Agrim Sachdeva (Indiana University); Sagar Samtani (Indiana University); Hongyi Zhu (University of Texas at San Antonio)*
15:45-16:00	**Break**		
17:00-17:15	**Shuttle Service (First Round) to Indianapolis Motor Speedway Museum (Pickup Location: TBD)**		
16:00-17:15	**Invite Only Editorial Roundtable (Olivia Sheng, Dokyun Lee; Wabash 1)**	**Invite Only Editorial Roundtable (Sumit Sarkar, Huimin Zhao; Room 122)**	**Invite Only Editorial Roundtable (Galit Shmueli, Gautam Pant; Room 123)**
17:30-17:45	**Shuttle Service (Second Round) to Indianapolis Motor Speedway Museum (Pickup Location: TBD)**		
17:30-19:00	**DS-CIST Joint Social Event @ Indianapolis Motor Speedway Museum (Appetizers and Drinks Provided)**		
19:00-19:30	**Shuttle Service back to Indianapolis Convention Center (Pickup Location: TBD)**		
19:30-21:00	**DS-CIST Joint Dinner @ Indianapolis Convention Center**		