

AI Symposium Posters



Human-AI Collaboration

1. *Active Learning of Action Feasibility*, Caris Mariah Moses (Massachusetts Institute of Technology)
2. *Accelerated Robot Learning via Human Brain Signals*, Iretiayo Akinola (Columbia University)
3. *Layered Perspectives: Multimodal Representations of Middle School Girls' Engagement in a Computer Science Camp*, Angela Stewart (Carnegie Mellon University)
4. *Do You Still Trust Me? Human-Robot Trust Repair Strategies*, Connor Esterwood (University of Michigan), Lionel P. Robert (University of Michigan)
5. *Heterogeneous Human-Robot Task Allocation Based on Bi-directional Trust*, Arsha Ali (University of Michigan), Hebert Azevedo-Sa (University of Michigan), Dawn M. Tilbury (University of Michigan), Lionel P. Robert Jr. (University of Michigan)
6. *FedScale: Benchmarking Model and System Performance of Federated Learning at Scale*, Fan Lai (University of Michigan), Yinwei Dai (University of Michigan), Xiangfeng Zhu (University of Michigan), Harsha V. Madhyastha (University of Michigan), Mosharaf Chowdhury (University of Michigan)
7. *WhyAct: Identifying Action Reasons in Lifestyle Vlogs*, Oana Ignat (University of Michigan), Santiago Castro (University of Michigan), Hanwen Miao (University of Michigan), Weiji Li (University of Michigan), Rada Mihalcea (University of Michigan)
8. *Optimal Distribution of Tasks in Human-Autonomy Teams*, Haochen Wu (University of Michigan), Amin Ghadami (University of Michigan), A. Emrah Bayrak (Stevens Institute of Technology), Bogdan Epureanu (University of Michigan)
9. *Investigating Unsupervised Learning Methods to Select Fair Samples of Large Unlabelled Image Datasets*, Yuqing Qiu (University of Michigan), Ruiyu Li (University of Michigan), Kevin Wang (University of Michigan), Sophia Johncheck (University of Michigan), Carol Flanagan (University of Michigan)
10. *Learning to Mediate Disparities Towards Pragmatic Communication*, Yuwei Bao (University of Michigan), Joyce Chai (University of Michigan)
11. *MindCraft: Theory of Mind Modeling for Situated Dialogue in Collaborative Tasks*, Cristian-Paul Bara (University of Michigan), Sky CH-Wang (Columbia University, University of Michigan), Joyce Chai (University of Michigan)
12. *Towards Classifying Human Circadian Rhythm Using Multiple Modalities*, Kais Riani (University of Michigan), Salem Sharak (University of Michigan), Kapotaksha Das (University of Michigan), Mohamed Abouelenien (University of Michigan), Mihai Burzo (University of Michigan), Rada Mihalcea (University of Michigan), John Elson (Ford), Clay Maranville (Ford), Kwaku Prakah-Asante (Ford), Waqas Manzoor (Ford)

13. *Multimodal Detection of Drivers Drowsiness and Distraction*, Kapotaksha Das (University of Michigan), Salem Sharak (University of Michigan), Kais Riani (University of Michigan), Mohamed Abouelenien (University of Michigan), Mihai Burzo (University of Michigan), Michalis Papakostas (University of Michigan)
14. *An Animated Picture Says at Least a Thousand Words: Selecting Gif-based Replies in Multimodal Dialog*, Xingyao Wang (University of Michigan), David Jurgens (University of Michigan)

Computer Vision & Robotics

15. *RedCaps: Web-Curated Image-Text Data Created by the People, For the People*, Karan Desai (University of Michigan), Gaurav Kaul (University of Michigan), Zubin Trivadi Aysola (University of Michigan), Justin Johnson (University of Michigan)
16. *Acquisition of Natural Adversarial Examples via Web-Scale Visual Search*, Stefan Larson (SkySync, Inc.), David Kuang (University of Michigan)
17. *Bootstrap Your Own Correspondences*, Mohamed El Banani (University of Michigan), Justin Johnson (University of Michigan)
18. *Towards Navigation by Reasoning Over Spatial Configuration*, Yue Zhang (Michigan State University), Quan Guo (Michigan State University) Parisa Kordjamshidi (Michigan State University)

Machine Learning

19. *AI For Bias Detection: Investigating the Existence of Racial Bias in Police Killings*, Anaiy Somalwar (Aspiring Scholars Directed Research Program), Chinmay Bansal (Aspiring Scholars Directed Research Program), Nathan Lintu (Aspiring Scholars Directed Research Program), Rishab Shah (Aspiring Scholars Directed Research Program), and Phil Mui (Aspiring Scholars Directed Research Program)
20. *Robustness of Fairness in Machine Learning*, Serafina Kamp (University of Michigan), Andong Luis Li Zhao (Northwestern), Sindhu Kutty (University of Michigan)
21. *Deep Temporal Convolutional Neural Network for Meteorological Drought Forecasting*, Sonnet Xu (Wayne State University)
22. *Image-Based Air Quality Forecasting Through Multi-Level Attention*, Tony Zhang (University of Michigan), Robert P. Dick (University of Michigan)
23. *Task-Driven Discovery of Perceptual Schemas for Generalization in Reinforcement Learning*, Wilka Carvalho (University of Michigan), Andrew Lampinen (DeepMind), Kyriacos Nikiforou (DeepMind), Felix Hill (DeepMind), Murray Shanahan (DeepMind)
24. *Estimating Calibrated Individualized Survival Curves with Deep Learning*, Fahad Kamran (University of Michigan), Jenna Wiens (University of Michigan)
25. *Machine Learning Beyond Accuracy*, Shibani Santurkar (Stanford University)
26. *Active Imitation Learning with Noisy Guidance*, Kianté Brantley (University of Maryland), Amr Sharaf (University of Maryland), Hal Daumé III (University of Maryland, Microsoft Research)
27. *Learning Action Translator for Meta Reinforcement Learning on Sparse-Reward Tasks*, Yijie Guo (University of Michigan), Qiucheng Wu (University of Michigan), Honglak Lee (University of Michigan)

28. *DomiKnowS: A Library for Integration of Symbolic Domain Knowledge in Deep Learning*, Hossein Rajaby Faghihi (Michigan State University), Quan Guo (Sichuan University), Andrzej Uszok (Florida Institute for Human and Machine Cognition), Aliakbar Nafar (Michigan State University), Parisa Kordjamshidi (Michigan State University)

Speech & Language

29. *Automatically Detecting Errors and Disfluencies in Read Speech to Predict Cognitive Impairment in People with Parkinson's Disease*, Amrit Romana (University of Michigan), John Bandon (University of Michigan), Matthew Perez (University of Michigan), Stephanie Gutierrez (Northwestern University), Richard Richter (Northwestern University), Angela Roberts (Northwestern University), Emily Mower Provost (University of Michigan)
30. *What Gestures Can Say About Language? Learning Meaningful Gesture Embeddings*, Artem Abzaliev (University of Michigan), Rada Mihalcea (University of Michigan)
31. *How Well Do You Know Your Readers? Reader-Aware Question Generation*, Ian Stewart (University of Michigan), Rada Mihalcea (University of Michigan)
32. *Tiered Reasoning for Intuitive Physics: Toward Verifiable Commonsense Language Understanding*, Shane Storks (University of Michigan), Qiaozi Gao (Michigan State University), Yichi Zhang (University of Michigan), Joyce Chai (University of Michigan)
33. *Hierarchical Task Learning from Language Instructions with Unified Transformers and Self-Monitoring*, Yichi Zhang (University of Michigan), Joyce Chai (University of Michigan)
34. *Measuring Sentence-Level and Aspect-Level (Un)certainty in Science Communications*, Jiaxin Pei (University of Michigan), David Jurgens (University of Michigan)
35. *Claim Matching Beyond English to Scale Global Fact-Checking*, Ashkan Kazemi (University of Michigan), Kiran Garimella (Massachusetts Institute of Technology), Devin Gaffney (Meedan), Scott A. Hale (Oxford Internet Institute, University of Oxford and Meedan)
36. *CLIFF: Contrastive Learning for Improving Faithfulness and Factuality in Abstractive Summarization*, Shuyang Cao (University of Michigan), Lu Wang (University of Michigan)
37. *An Out-of-Distribution Document Classification Benchmark for RVL-CDIP*, Stefan Larson (SkySync, Inc.), David Kuang (SkySync, Inc.; University of Michigan), Lydia Tan (SkySync, Inc; University of Michigan), Deepak Thiagarajan (SkySync, Inc; University of Michigan), Gordon Lim (University of Michigan), Yutong AI (University of Michigan), Brian Chen (University of Michigan), Alexis Johnson (SkySync, Inc.)
38. *Discovering Logical Fallacies: From Quiz to Climate Change News*, Zhijing Jin (MPIÐ), Tejas Vaidhya (IIT), Xiaoyu Shen (MPI), Yiwen Ding (University of Michigan), Zhiheng Lyu (HKU), Mrinmaya Sachan (ETH), Rada Mihalcea (University of Michigan), Bernhard Schoelkopf (MPIÐ)

AI & Health

39. *Model Selection for Offline Reinforcement Learning: Practical Considerations for Healthcare Settings*, Shengpu Tang (University of Michigan), Jenna Wiens (University of Michigan)
40. *Deep Transfer Learning for Automated Diagnosis of Skin Lesions from Photographs*, Doyoon Kim (Grover Cleveland High School), Emma Rocheteau (University of Cambridge)
41. *FallWatch: A Novel Approach for Through-Wall Fall Detection in Real-Time for the Elderly Using Artificial Intelligence*, Aditya Chebrolu (Independence High School, Frisco, TX)
42. *Articulatory Coordination for Speech Motor Tracking in Huntington Disease*, Matthew Perez (University of Michigan), Amrit Romana (University of Michigan), Angela Roberts (Northwestern University), Noelle Carlozzi (University of Michigan), Jennifer Ann Miner (University of Michigan), Praveen Dayalu (University of Michigan), Emily Mower Provost (University of Michigan)
43. *Universal Structural Descriptors for Intermolecular Interactions: From Protein-Protein to Protein-Nanoparticle*, Minjeong Cha (University of Michigan), Emine Sumerya Turali Emre (University of Michigan), Nicholas A. Kotov (University of Michigan)
44. *Intracerebral Hemorrhage Detection in Computed Tomography Scans Through Cost-Sensitive Machine Learning*, Rushank Goyal (Betsos)
45. *Micromodels for Efficient, Explainable, and Reusable Systems: A Case Study on Mental Health*, Andrew Lee (University of Michigan), Jonathan K. Kummerfeld (University of Michigan), Lawrence C. An (University of Michigan), Rada Mihalcea (University of Michigan)
46. *A Convolutional Neural Network Model for Screening Breast Lesions by Mammography*, Swati Goyal (Gandhi Medical College, Bhopal, Madhya Pradesh), BR Shrivastava (Cancer Hospital & Research Institute, Gwalior, Madhya Pradesh)
47. *Predicting Hospital Readmission*, Riya Thakore, Parisa Kordjamshidi
48. *Mapping of Cerebrovascular Hemodynamics Using Deep Learning-Driven Super-Resolution 4D Flow MRI and Physics-Informed Image Analysis*, E. Ferdian (University of Auckland), D. Marlevi (Massachusetts Institute of Technology), J. Schollenberger (UM), M. Aristova (Northwestern), E.R. Edelman (Massachusetts Institute of Technology), S. Schnell (University of Greifswald), C.A. Figueroa (UM), D.A. Nordsletten (UM, KCL), A.A. Young (KCL)
49. *A Hierarchical Approach to Multi-Event Survival Analysis*, Donna Tjandra (University of Michigan), Yifei He (University of Michigan), Jenna Wiens (University of Michigan)
50. *Deep Learning Applied to Chest X-rays: Exploiting and Preventing Shortcuts*, Sarah Jabbour (University of Michigan), David Fouhey (University of Michigan), Ella Kazerooni (University of Michigan), Michael Sjoding (University of Michigan), Jenna Wiens (University of Michigan)
51. *Prediction of Imminent Spontaneous Preterm Birth in Women With a Sonographic Short Cervix: A Machine Learning Based Approach Using Amniotic Fluid Proteins*, Dereje W. Gudicha (Perinatology Research Branch, NICHD/NIH; Wayne State University), Roberto Romero (Perinatology Research Branch, NICHD/NIH; Wayne State University; University of Michigan; Michigan State University), Nardhy Gomez-Lopez (Perinatology Research Branch, NICHD/NIH; Wayne State University), Jose Galaz (Perinatology Research Branch, NICHD/NIH; Wayne State University), Gaurav Bhatti (Perinatology Research Branch, NICHD/NIH; Wayne State University), Bogdan Done (Perinatology Research Branch, NICHD/NIH; Wayne State University)

State University), Eunjung Jung (Perinatology Research Branch, NICHD/NIH; Wayne State University), Dahiana Gallo (Perinatology Research Branch, NICHD/NIH), Mariachiara Bosco (Perinatology Research Branch, NICHD/NIH), Manaphat Suksai (Perinatology Research Branch, NICHD/NIH), Ramiro Diaz Primera (Perinatology Research Branch, NICHD/NIH), Piya Chaemsaitong (Perinatology Research Branch, NICHD/NIH), Francesca Gotsch (Perinatology Research Branch, NICHD/NIH), Stanley M. Berry (Perinatology Research Branch, NICHD/NIH; Wayne State University), Tinnakorn Chaiworapongsa (Perinatology Research Branch, NICHD/NIH; Wayne State University), Adi L. Tarca (Perinatology Research Branch, NICHD/NIH; Wayne State University)

52. *Improved Forecasting of American COVID-19 Cases and Deaths Through Recursive Machine Learning Modelling*, Anaiy Somalwar (BASIS Independent Silicon Valley, San Jose State University)