Google Research

Algorithms and Optimization

Vasilis Syrgkanis, Stanford University Automating the Causal Machine Learning Pipeline

Manish Raghavan, Massachusetts Institute of Technology Synthetic Data Generation from Aggregate Data with Applications to Privacy and the US Census

Bo Waggoner, University of Colorado Multi-Stage Pandora's Box for Search and Decision Making

Josh Alman, Columbia University Computational Complexity of Attention

Yan Gu, University of California, Riverside Yihan Sun, University of California, Riverside *Efficient Parallel Algorithms for Graph Mining*

Hung Le, University of Massachusetts - Amherst Algorithmic Foundations of Road Networks

Applied Science

Chibueze Amanchukwu, University of Chicago ElectrolyteGPT to accelerate battery electrolyte discovery

Faez Ahmed, Massachusetts Institute of Technology Md Ferdous Alam, Massachusetts Institute of Technology MechTool-LLM: Integrating Large Language Models with Engineering Tools for Advanced Mechanical Engineering

Shu-han Hsu, National Cheng Kung University Adaptive Transmission Electron Microscopy (TEM): Incorporating Large Language Models for Automated TEM Imaging, Debugging and Explainability

Sanjiban Choudhury, Cornell University Imitation Labs: Interactive Experiment Planning with LLM Apprentices

Eric Y. Ma, University of California, Berkeley Parsing Physics Literature with Large Language Models

Constantin Pape, Georg-August-Universität Göttingen Vision Foundation Models for Bioimage Segmentation

Human Computer Interaction

Motahhare Eslami, Carnegie Mellon University Ken Holstein, Carnegie Mellon University Generative AI Meets Responsible AI: Supporting User-Driven Auditing of Generative AI Systems

Vinitha Gadiraju, Wellesley College Alicia Boyd, New York University Improving Disability Representation in Large Language Models Through Reflexive and Collaborative Annotation

Hong Shen, Carnegie Mellon University Understanding and Supporting Marginalized Communities in AI Auditing and Red Teaming

Maitraye Das, Northeastern University Designing Accessible Collaborative Ideation Tools for Blind and Low Vision People

Anil Ufuk Batmaz, Concordia University Early Warning Systems for Hand Tracking Failures in VR Head-Mounted Displays

Stephanie Valencia Valencia, University of Maryland - College Park Vaishnav Kameswaran, University of Maryland - College Park Designing Al-powered DIY Communication Tools with AAC users

Cori Faklaris, University of North Carolina at Charlotte CYBERSECURITY BUDDY: A Human-in-the-loop AI App for Encouraging Security and Privacy Best Practices

Health Research

Aduragbemi Banke-Thomas, London School of Hygiene & Tropical Medicine Equity in Geographical Accessibility for Emergency Obstetric Care in sub-Saharan Africa

Irene Y. Chen, University of California, Berkeley Closing the Gap: Evaluating and Improving Clinical Risk Prediction Models for Patients with Lower Access to Care

Marzyeh Ghassemi, Massachusetts Institute of Technology Addressing Intersectional Clinical Fairness with Unknown Demographic Attributes

Preeya Khanna, University of California, Berkeley Machine learning for personalized at-home motor assessment and therapy in stroke participants

Maggie Makar, University of Michigan Reliability through causal alignment: causally motivated models for pain management

Milad Nazarahari, University of Alberta A Large-Scale Movement Dataset for AI-Enabled Degenerative Cervical Myelopathy Monitoring Sergey Stavisky, University of California, Davis David Brandman, University of California, Davis An "AI Listener" for Speech Restoration via Brain- and Muscle-Computer Interfaces

Laleh Seyyed Kalantari, York University Toward fair AI in radiology via Google CXR foundation models

Xiang Li, Harvard University Quanzheng Li, Harvard University Tailoring Large Language Models for the Diagnosis and Management of Late-life Depression Patients with Limited Access to Healthcare Resources

Machine Learning and data mining

Andrej Risteski, Carnegie Mellon University Algorithmic Foundations for Generative AI: Inference, Distillation and Non-Autoregressive Generation

Cesar A Uribe, Rice University Enabling Next-Generation Performance for Efficient Distributed Training

Nan Jiang, University of Illinois at Urbana-Champaign Unification and Novel Interaction Protocols between Online and Offline RL

Chenguang Wang, Washington University in St. Louis Before Grounding Responses: Learning to Ground References of Large Language Models

Andrea Bajcsy, Carnegie Mellon University In-the-Wild Robot Behavior Alignment from Human Preferences

Aryan Mokhtari, University of Texas at Austin Federated Representation Learning for Resource Constrained Edge Devices

Han Zhao, University of Illinois at Urbana-Champaign Trustworthy Machine Learning via Post-Processing

Aditi Raghunathan, Carnegie Mellon University Robust fine-tuning of foundation models

Song Mei, University of California, Berkeley Theoretical Foundations of Foundation Models and Generative AI

Kwabena Afriyie Owusu, University of Energy and Natural Resources Agent-Based Model to Investigate the Effects of Configuration, Timing, and Duration of Closed Fishing Areas on the Ecologic and Economic Sustainability of the Artisanal Sardinella Fishery in Ghana Chris Schwiegelshohn, Aarhus University Learning and Compression Algorithms for Clustering

Joel Mackenzie, University of Queensland Compressing Neural Indexes for Short and Long-Term Applications

Machine Perception

Georgia Gkioxari, California Institute of Technology A Foundation Model for 3D Perception

Jia-Bin Huang, University of Maryland - College Park Text-driven Dynamic 3D Scene Generation

David Lindell, University of Toronto Computational Single-Photon Photography for Dynamic Vision in the Dark

Yu-Lun Liu, National Chiao Tung University Utilizing Dynamic 3D Gaussians for Space-Time Video Super-Resolution

Francesco Locatello, Institute of Science and Technology Austria Causal Lifting: Eliciting causality from statistical models

Systems and Networking systems

Muhammad Shahbaz, Purdue University Robust and Tail-Optimal Collective Communication for Distributed Training in the Cloud

Amy Ousterhout, University of California, San Diego Preemptive User-Level Scheduling with User Interrupts

Ambuj Varshney, National University of Singapore From Supply Chains to Personal Belongings: Designing Zero-Battery Trackers

Andrew Crotty, Northwestern University Deep Semantic Modeling for Compressing and Querying Big Data

Pedro Fonseca, Purdue University ML-based Concurrency Bug Finding for Operating System Kernels

Adam Belay, Massachusetts Institute of Technology Making Kernel Bypass Practical for the Cloud

Natural Language Processing

Tatsunori Hashimoto, Stanford University Synthetic data for small, efficient language models Ming Jiang, Indiana University Unity in Diversity: Augmenting the Geo-Cultural Competence of Language Technologies for Intercultural Communication

Ashwini Vaidya, Indian Institute of Technology - Delhi Does Quantity Buy Quality? Testing Argument Structure Knowledge in Hindi

Aditya Joshi, University of New South Wales Diptesh Kanojia, University of Surrey A benchmark for sentiment and sarcasm classification for dialects of English

Peter Henderson, Princeton University Improving and Understanding Agent Abilities to Follow Law-like Rules

Kengatharaiyer Sarveswaran, University of Jaffna Developing a Sri Lankan Tamil Corpus

Privacy

Florian Tramer, ETH Zurich Adaptive Privacy Attacks on Machine Learning Models

Pardis Emami-Naeini, Duke University Designing A Usable Security And Privacy Label "Dictionary"

Yupeng Zhang, University of Illinois at Urbana-Champaign Proof of Training and its Applications in Machine Unlearning and Differential Privacy

Peihan Miao, Brown University Scalable Private Set Intersection for Broader Applications

Quantum Computing

Dakshita Khurana, University of Illinois at Urbana-Champaign Cryptography for the Quantum Age

Linran Fan, University of Texas at Austin Coherent superconducting-photonic transducers for scalable quantum computing networks

Security

Marc Juarez, University of Edinburgh Providing Accountability to the Machine Learning Supply Chain

Jiang Ming, Tulane University Precise Third-Party Library Detection in Android: Leveraging Surrounding Class Context for Globally Optimal Matches Earlence Fernandes, University of California, San Diego Practical Least-Privilege Authorization with State for Internet Services

Michael Schwarz, CISPA Helmholtz Center for Information Security (*Micro-*)*Architectural Security Analysis of RISC-V CPUs with Vendor Extensions*

Joanna Cecilia da Silva Santos, University of Notre Dame Leveraging the Power of Large Language Models to Generate Security Tests for Mobile Apps

Software engineering and programming languages

Nuno P. Lopes, Instituto Superior Técnico, Universidade de Lisboa Automatic Verification of LLVM Loop Optimizations

Xiaoning Du, Monash University Towards Faster and Greener LLM-assisted Programming

Last update on Mar 26, 2024