

 **Ai.Summit**

2025 AI SUMMIT
POSTER COMPETITION

PROGRAM

Below is a list of participants that will be presenting their posters at the 2025 AI Summit hosted by the John and Marcia Price College of Engineering

**Participants with an asterisk at the start of their abstract title were selected for a lighting talk*





NICHOLAS BRIMHALL

Utah State University | Undergraduate Student | Mathematics and Statistics

Informing Snow Models: An International Dataset of Annual Maximum Snow Events for Extreme Value Analysis



SEONGIL HEO

University of Utah | Graduate Student | School of Computing

Adaptive Learning for Open Agent Systems



DHRUV MEDURI

University of Utah | Graduate Student | School of Computing

**Mapping Chemical Space: AI-Enhanced Topological Analysis with Mapper*



BO YU

The University of Utah | Graduate Student | Civil and Environmental Engineering

**TransportMoE: A Generalized Large Language Model Framework for Multi-Task Transportation Systems*



BYRON MILLET

University of Utah | Graduate Student | Materials Science and Engineering

**Optimization of Radiation Shielding for Electromagnetic Liquid Sodium Pumps in Next Generation Nuclear Reactors*



TALHA QUDDOOS

Utah State University | Graduate Student | Civil and Environmental Engineering

GeoAI for Disaster Response: Benchmarking Deep Learning Architectures for Post-Earthquake Damage Detection Using Satellite Imagery



MICHAEL KEYSER

University of Utah | Graduate Student | Electrical and Computer Engineering

Modeling the Effects of Manufacturing on Analog AI Accelerators



SHAILAJA PANDEY

Utah State University | Graduate Student | Civil and Environmental Engineering

**Automated Traffic Sign Condition Assessment Using Computer Vision for Highway Infrastructure Management*



FARZAD ORDUBADI

University of Utah | Graduate Student | Electrical and Computer Engineering

Analog AI Accelerator for Extreme Energy Efficiency and High Speed



AUSTIN EITING

University of Utah | Graduate Student | Chemical Engineering

A Coherent Machine Learning Based Raman Spectra Analysis Strategy for Classifying Low Temperature Level of Reduction in 3D-Printed Graphene Oxide



TRUPTI MOHANTY

University of Utah | Graduate Student | Materials Science and Engineering

**Text Conditioned Crystal Structure Generation using Fine-Tuned Large Language Model*



PARHAM BAKHTIARI

Utah State University | Graduate Student | Civil and Environmental Engineering

Instance Segmentation-Based Element-Level Condition Assessment for Steel Bridges



VIGNESH BABU RAO

University of Utah | Postdoctoral Researcher | Mechanical Engineering

An Interleaved Physics-based Deep-learning Framework as a New Cycle Jumping Approach for Microstructurally Small Fatigue Crack Growth Simulations



PAUL BRADFORD

Utah State University | Graduate Student | Electrical and Computer Engineering

Using AI to model and predict the lifetime of EV chargers



ATHARV KULKARNI

University of Utah | Undergraduate Student | School of Computing

Reinforcing Code Generation: Improving Text-to-SQL with Execution-Based Learning for Robust Temporal Reasoning



AKANSHA KALRA

University of Utah | Graduate Student | School of Computing

How vulnerable is my learned policy? Adversarial attacks on modern behavioral cloning policies



JAINTA PAUL

University of Utah | Graduate Student | School of Computing

Listening Without Hearing: Unmasking Privacy Risks in On-Sensor Machine Learning



ALI NAMIN

Utah State University | Graduate Student | Civil and Environmental Engineering

**Comparison of Image-Based CNN and 1D Time-History ResNet for Quality Assessment of Ground Motion Records using raw records*



GARRETT GREINER

University of Utah | Graduate Student | School of Computing

**HyperVerITAS: Efficient and Privacy-Preserving Image Provenance for AI-Generated Images*



VARUN RAVEENDRA

University of Utah | Graduate Student | Robotics

**Decentralized Collective Behavior Awareness in Communication-Constrained Robot Swarms*



HANNAH FLUCKIGER

Utah State University | Undergraduate Student | Mathematics and Statistics

River Rapid Detection Pipeline Using AI



FENGZE YANG

University of Utah | Graduate Student | Civil and Environmental Engineering

**REACT: A Real-Time Edge-AI Based V2X Framework for Rear-End Collision Avoidance in Autonomous Driving System*



CONNOR MATTSON

University of Utah | Graduate Student | School of Computing

**R2BC: Multi-Agent Imitation Learning from Single-Agent Demonstrations*



ANDRE CHU

University of Utah | Graduate Student | Biomedical Informatics

**Automated Research Replication System: AI-Powered Validation of Machine Learning Studies*



THOMAS KERBY

Utah State University | Graduate Student | Mathematics & Statistics

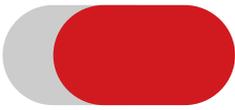
Nexarag: Accelerating Research with AI-Enhanced Knowledge Graphs



RILEY MAY

Utah State University | Graduate Student | Mathematics & Statistics

Empirical Evaluation of Bayes Error Rate Bounds in Binary Classification



YIXUAN HUANG

University of Utah | Graduate Student | School of Computing

**Points2Plans: From Point Clouds to Long-Horizon Plans with Composable Relational Dynamics*



NICHOLAS BAKER

University of Utah | Graduate Student | Chemical Engineering

Sequentially scaled cPIKANs for Multiscale PDEs



FATEME HASHEMI CHALESHTORI

University of Utah | Graduate Student | School of Computing

On Evaluating Explanation Utility for Human-AI Decision Making in NLP



RILEY SINEMA

Brigham Young University | Graduate Student | School of Computing

Assessing the Probabilistic Fit of Neural Regressors via Conditional Congruence



HASAN MUHAMMAD SAYEED

University of Utah | Graduate Student | Materials Science and Engineering

KnowMat: An LLM-Powered System for Structured Knowledge Extraction in Materials Science



FOAD NAMJOO

University of Utah | Graduate Student | Kahlert School of Computing

Efficient and Stable Multi-Dimensional Kolmogorov-Smirnov Distance



DEVAGOPAL ANIL SREENIVAS MAYA

University of Utah | Graduate Student | Kahlert School of Computing

**Loro: Breaking Coded Languages using Large Language Models*



HAOZHE CHEN

Utah State University | Graduate Student | Mathematics and Statistics

**Functional Information Geometry: Visualizing and Denoising High-Dimensional Dynamical Systems*



BEN SHAW

Utah State University | Graduate Student | Mathematics and Statistics

Continuous Symmetry Discovery and Enforcement for Machine Learning



KELVYN BLADEN

Utah State University | Graduate Student | Mathematics & Statistics

Conditional Local Importance by Quantile Expectation



ALI LARIAN

University of Utah | Graduate Student | School of Computing

**Learner and Teacher Perspectives on Learning Rewards from Multiple Types of Human Feedback*



ZIFAN WU

University of Utah | Graduate Student | School of Computing

Understanding Dominant Neurons in Deep Reinforcement Learning



NICHOLAS HAUSCHILD

University of Utah | Undergraduate Student | Psychology & Marriott Library

AI and the Future of Research: Comparing Students' perspectives of AI Research Tools to a Librarian's



NATHAN STRINGHAM

University of Utah | Graduate Student | School of Computing

Teaching People AI's Errors and Getting it Right



ARUZHAN TLEUBEK

University of Utah | Graduate Student | Chemical Engineering

Physics-informed Neural Solvers and Operators using Kolmogorov Arnold Networks



ANDERSON SAFRE

Utah State University | Graduate Student | Civil and Environmental Engineering

Deep Learning Framework for Fruit Counting and Yield Mapping in Tart Cherry Using YOLOv8 and YOLO11



DAVID VILLARREAL ZEGARRA

University of Utah | Graduate Student | Biomedical Informatics

Evaluation of a multilingual large language model for tobacco cessation referrals



JORDAN THOMPSON

University of Utah | Graduate Student | School of Computing

Safe Autonomous Surgical Robots Through Uncertainty Aware Collaboration



SUDHANVA MANJUNATH ATHREYA

University of Utah | Graduate Student | School of Computing

Efficient EHR Foundational Models: A Mixture-of-Experts Approach for Patient Timeline Prediction



ALEXANDER VENEZIE

University of Utah | Undergraduate Student | Mechanical Engineering

Optimization of Bioprinting Parameters for Cerebral Blood Vessel Fabrication Using Bayesian Machine Learning



ALEXANDER MILLAR

University of Utah | Graduate Student | Biomedical Informatics

**Conformal Prediction for Scalable Uncertainty Quantification in Health and Well-Being*



CHIMDI IHEDIWA

University of Utah | Undergraduate Student | Biomedical Engineering

Image Processing of X-rays of the Spine and Spinal Cord Stimulation Implants



RAMSEY ISSA

University of Utah | Graduate Student | Materials Science and Engineering

**From Black Box to Chemical Insight: Interpretable Machine Learning Framework for Flowable Dental Composite Formulations*



MARY JEPPSON

University of Utah | Graduate Student | Chemical Engineering

Integration of Square Wave Voltammetry and Machine Learning to Detect Tuberculosis via Methyl Nicotinate in Patient Breath



ZOHRE KARIMI

University of Utah | Graduate Student | Kahlert School of Computing

**Reward Learning from Suboptimal Demonstrations with Applications in Surgical Electrocautery*



MARGARET POZO

University of Utah | Undergraduate Student | Biomedical Engineering

Translating AI Model Performance into Clinical Utility for Predicting Hospital Next-Day Discharge



ARATHY MENON N P

National Institute of Technology Calicut | Graduate Student | Computer Science and Engineering

AI-Powered Cytology for Early Bladder Cancer Detection



EMMA PINEGAR

University of Utah | Graduate Student | School of Computing

Planning Surgeries With Flexible Needles



KYLEE NORTH

University of Utah | Research Staff | Biomedical Engineering

Predicting the Healing of Lower Extremity Fractures Using Wearable Ground Reaction Force Sensors and Machine Learning



MARTIN MATAK

University of Utah | Postdoctoral Researcher | School of Computing

DextrAH-G: Pixels-to-Action Dexterous Arm-Hand Grasping with Geometric Fabrics



TANNER WATTS

University of Utah | Graduate Student | Robotics

**PushNet: A Surgical Retraction Assistant for Central Airway Obstruction Removal*



JOE LIECHTY

University of Utah | Graduate Student | School of Computing

"Hey Medbot": Toward Autonomous Assistants in Operating Rooms



WYATT YOUNG

University of Utah | Graduate Student | Biomedical Engineering

**Optimizing Sensor Placement for Terrain Classification*



SONNY JONES

University of Utah | Graduate Student | Biomedical Engineering

**Hierarchical Reinforcement Learning for Adaptive Walking Control Using Predicted Lower-Limb Sensor Signals*



MOHAMMAD MOHAMMADI

University of Utah | Graduate Student | Chemical Engineering

**Classification of Monoamine Neurotransmitters Using LSTM Applied to UV Plasmonic-Enhanced Autofluorescence Time Decay Series*