

REZA (REY) SANAYEI

 rsanayei.com |  rsanayei@arizona.edu |  linkedin.com/in/rsanayei |  Google Scholar

EDUCATION

-
- M.S. in Computer Science | University of Arizona, GPA: 4.0** Expected 2027
- **Advisors:** Prof. Mihai Surdeanu, Prof. Ellen Riloff — *Focus on NLP, LLMs, Machine Learning*
 - **Coursework:** Machine Learning, Neural Networks, NLP, Computer Vision, Information Retrieval, Algorithms, Databases
- B.S. in Computer Science (Honors) | University of Arizona, GPA: 3.96** May 2024
- **Honors:** Excellence in Undergraduate Research Award, Galileo Circle Scholar (Top 6 of 1,277), Phi Beta Kappa (Top 5%)

RESEARCH EXPERIENCE

-
- Graduate Research Assistant | University of Arizona, CLU Lab** Aug 2023 – Present
- Published 2 first-author papers (EMNLP '25, SemEval '24) on LLM reasoning and hallucination detection
 - Designed the first evaluation benchmark for LLMs' non-linear reasoning, leveraging Argumentation Theory semantics ^[1]
 - Proposed ensemble ML methods (PyTorch, Transformers) for hallucination detection in LLM outputs ^[2]
 - Developed authorship-style classifiers for machine-generated text detection ^[3]
- Undergraduate Research Assistant | University of Arizona, Pauli Lab** Apr 2023 – Feb 2024
- Engineered HPC pipelines to process terabytes of crop imaging data daily for ML-based phenotyping
 - Designed CNNs for panicle detection with robust generalization across diverse crop types

PROFESSIONAL EXPERIENCE

-
- Software Engineering Intern, ML | Google** Sep 2026 – Dec 2026
- Synthetic data for embedding models
- Machine Learning Research Intern | Scale AI** May 2026 – Sep 2026
- Designed an agentic verifier targeting long-horizon RL environments
 - Studied privacy degradation in personalized agent post-training
 - Developing a long-horizon multimodal benchmark for personal assistant agents
- Machine Learning Engineering Intern | Tucson Loves Music** May 2025 – Aug 2025
- Automated ingestion of 1K+ monthly events with Playwright + Docker pipelines, deployed via CI/CD workflows
 - Engineered a vision-language model (VLM) pipeline for flyer/poster parsing, reducing manual event data entry by 90%

PROJECTS

-
- Retrieval-Augmented Transformers with FAISS** May 2025
- Implemented FAISS-based attention strategies in GPT-2 to reduce long-context inference costs
 - Improved reasoning accuracy on LAMBADA benchmark by 3× with faster CPU inference
- Chain-of-Thought Faithfulness in LLMs** Dec 2024
- Created evaluation framework to measure LLM adherence to reasoning paths under prompt modifications
 - Benchmarked reasoning consistency on GSM8K arithmetic tasks in zero-/few-shot settings
- Jeopardy! Question-Answering System** Apr 2023
- Built a QA system over 280K+ Wikipedia docs using Lucene indexing and TF-IDF retrieval
 - Applied K-means clustering and supervised SVMs to improve answer accuracy to 70%

TEACHING EXPERIENCE

-
- Head TA (Object-Oriented Programming) | University of Arizona** Aug 2021 – May 2024
- Led and mentored 8 TAs in delivering course content to 160+ students per semester
 - Designed core programming assignments and oversaw a 5-week capstone group project covering OOP principles

LEADERSHIP EXPERIENCE

-
- President, Google Developer Student Club | University of Arizona** Aug 2023 – May 2024
- Revitalized the chapter, organizing ML/NLP-focused events and technical talks with 300+ total participants
 - Hosted workshops on LLMs, Hugging Face, and computer vision, fostering AI skill development among peers
- Computer Science Ambassador | University of Arizona** Jan 2024 – May 2024
- Represented CS department at outreach events, engaging 200+ high school students in discussions on AI and tech careers

TECHNICAL SKILLS

ML Libraries: SkyRL, Harbor, Ray, vLLM, SGLang, verl,slime, PyTorch, Transformers, TensorFlow, NumPy

Programming: Python, Java, C/C++, SQL, JavaScript, MATLAB, R

Data & Systems: HPC clusters, REST APIs, MySQL, PostgreSQL, MongoDB, AWS, GCP

Tools: Docker, Git/GitHub, Linux, Bash, Jupyter Notebook, L^AT_EX

PUBLICATIONS

- 1 **Reza Sanayei**, Srdjan Vesic, Eduardo Blanco, Mihai Surdeanu. Can LLMs Judge Debates? Evaluating Non-Linear Reasoning via Argumentation Theory Semantics. In *Findings of the Association for Computational Linguistics: EMNLP 2025*, pp. 21244–21262, Suzhou, China, November 2025.
- 2 **Reza Sanayei**, Abhyuday Singh, MohammadHossein Rezaei, Steven Bethard. MARiA at SemEval 2024 Task-6: Hallucination Detection Through LLMs, MNLI, and Cosine Similarity. In *Proceedings of the 18th International Workshop on Semantic Evaluation (SemEval-2024)*, pp. 1584–1588, Mexico City, Mexico, June 2024.
- 3 MohammadHossein Rezaei, Yaeun Kwon, **Reza Sanayei**, Abhyuday Singh, Steven Bethard. CLULAB-UOFA at SemEval-2024 Task 8: Detecting Machine-Generated Text Using Triplet-Loss-Trained Text Similarity and Text Classification. In *Proceedings of the 18th International Workshop on Semantic Evaluation (SemEval-2024)*, pp. 1498–1504, Mexico City, Mexico, June 2024.