Armin Rezaiyan-Nojani

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Education

University of Maryland, College Park — College Park, MD
Bachelor's of Science, Computer Science — *Jan 2024 — May 2026*
- GPA: 3.3/4.0

Thomas S. Wootton High School — Rockville, MD
High School Diploma — *Sep 2019 — May 2023*

- Relevant Coursework: Data Structures, Computer Networks and Security, Organization of Programming Languages, Introduction to Artificial Intelligence, Introduction to Data Science, Systems Programming, C, Discrete Structures, Algorithms, Statistics and Probability, Calculus I, Calculus II, Linear Algebra

Work Experience

Research and Development Engineer Intern — May 2025 — Present
Auria — *Colorado Springs, CO*
- Designed and deployed AI agents for satellite mission planning, enabling industry-specific workflows.
- Built a data pipeline with C# and Python to extract satellite data, enabling seamless ingestion by the agent.
- Led evaluation and adoption of AWS Bedrock, MCP integration, and driving production rollout.
- Co-authored a SmallSat 2025 publication on closed-loop tasking workflows with conversational agents.

Software Developer Intern — Jun 2024 — Sep 2024
Vortex Vector — *Silver Spring, MD*
- Built a hardware compatibility engine to automate component matching for custom glass assemblies.
- Designed a DynamoDB schema, unifying fragmented hardware catalogs across manufacturers.
- Utilize Python data parsers to extract, normalize, and filter product attributes for system integration.
- Accelerated design workflows by standardizing hardware selection and reducing manual lookup time for engineers.

Machine Learning Intern — Jun 2023 — Aug 2023
NASA — *Greenbelt, MD*
- Built a vector database and knowledge graph to improve discoverability of NASA's GES DISC archives.
- Linked PDF metadata and datasets using semantic embeddings for context-aware search.
- Integrated Neo4j relationships to enhance retrieval of related scientific materials.
- Benchmarked and published results at AGU 2023

Machine Learning Intern — Jun 2022 — Aug 2022
NASA — *Greenbelt, MD*
- Built an XGBoost Learning-to-Rank model to improve dataset relevance in NASA's GES DISC search engine
- Processed 230K+ user logs in Python to create training datasets and judgment lists.
- Engineered ranking features, boosting nDCG from 0.36 to 0.81.
- Delivered a prototype model and data pipeline adopted for future search-ranking research.

Publications

[1] N. Dhingra, S. Kearns, N. Evans, E. Herz, and A. Rezaiyan-Nojani, "Closed-Loop Satellite Planning and Scheduling for Low-Latency Data Collection and Analysis with a Conversational Agent Interface," in *Small Satellite Conference*, Salt Lake City, UT, 2025. [Online]. Available: https://digitalcommons.usu.edu/smallsat/2025/all2025/105/

[2] L. Kamper-Hinson, A. Rezaiyan-Nojani, and A. Mehrabian, "Enhancing Data and Knowledge Discoverability at NASA GES-DISC through Knowledge Graphs and Language Models," in *AGU Fall Meeting Abstracts*, 2023, pp. IN54A–1. [Online]. Available: https://ui.adsabs.harvard.edu/abs/2023AGUFMIN54A..01K/abstract

Skills

- **Languages**: Python, C/C++, C#, TypeScript, SQL, HTML/CSS, Assembly (MIPS, x86)
- **Technologies**: React, LangChain, PyTorch, scikit-learn, pandas, NumPy, Docker, AWS (S3, Lambda, Bedrock, DynamoDB), Neo4j