

EDUCATION

<div>University of Virginia</div> <div>B.S. Computer Science, B.A. Math</div> <div>GPA: 4.0</div> <div>Relevant Coursework: Data Structures and Algorithms II, Computer Systems and Organization II, Algorithmic Economics, Cryptocurrency, Linear Algebra, Probability, Introduction to Reinforcement Learning, Machine Learning.</div>	<div>Charlottesville, VA</div> <div>Aug 2023 – May 2027</div>
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EXPERIENCE

<div>Fullstack Engineer</div> <div>Forge</div> <div><ul style="list-style-type: none">Refactored Firebase cloud functions to address critical security vulnerabilities, resulting in a 78% reduction in failure rate for Airtable API queries and 35% improved response times.Modernized mission-critical Next.js applications including an applicant tracking system and a resume builder portal serving 500+ users with 99.8% uptime.</div>	<div>Aug 2024 – Present</div> <div>Richmond, VA</div>
<div>Artificial Intelligence Research Assistant</div> <div>Link Lab</div> <div><ul style="list-style-type: none">Developed a NLP Named Entity Recognition (NER) benchmarking system based on state of the art research and used it to validate various configurations of medical LLMs.Implemented a real-time hand keypoint detection system with sub-100ms latency, achieving 4x performance improvement over previous in-house solutions by optimizing multiprocessing on a NVIDIA Jetson Nano.</div>	<div>Jan 2024 – Jan 2025</div> <div>Charlottesville, VA</div>
<div>Backend Engineer</div> <div>Voltus</div> <div><ul style="list-style-type: none">Refactored and parallelized a containerized ETL service on AWS, implementing CI/CD pipelines that reduced critical failure rate by 91%.Migrated a Delta Lake file uploader service from Databricks Spark clusters to an internal, custom-built Go API, reducing cloud costs by \$60,000 annually and improving throughput by over 10x.Led documentation overhaul initiative for mission-critical ETL service that dramatically decreased onboarding time to the ETL project and reduced support tickets for the service by 38% through stakeholder consultation and data-driven user research.</div>	<div>May 2024 – Aug 2024</div> <div>San Francisco, CA</div>

PUBLICATIONS

<div>DKEC: Domain Knowledge Enhanced Multi-Label Classification for Diagnosis Prediction</div> <div>Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP)</div> <div>Xueren Ge, Abhishek Satpathy, Ronald Dean Williams, John A. Stankovic, Homa Alemzadeh</div> <div>10.48550/ARXIV.2310.07059</div>

PROJECTS

<div>CPR Tracking with Kinect Video Python, Open3D, PyTorch, NumPy, Docker</div> <div><ul style="list-style-type: none">Engineered a high-precision CPR benchmarking system using Open3D and PyTorch that achieved 95% accuracy in real-time rate and depth measurements from Kinect video streams, integrating depth-sensor data to establish ground-truth benchmarks and quantitatively evaluate performance of the pipeline.</div>	<div>Oct 2024 – Dec 2024</div>
<div>FoodPools Express.js, Supabase, Postgres, React.js, Stripe</div> <div><ul style="list-style-type: none">Engineered a cost-saving campus food delivery platform that reduces student expenses by 60% and decreases carbon emission by over 90% on food delivery orders, leveraging Supabase for authentication and data persistence, Express.js for a RESTful API backend, and React.js for a responsive frontend.</div>	<div>May 2024</div>

TECHNICAL SKILLS

<div>Languages: Python, Java, Rust, Javascript, C, Bash, SQL.</div> <div>Frameworks/Libraries: PyTorch, Polars, FastAPI, Django, Flask, React, Next.js, Postgres.</div> <div>Tools: Postman, Burp Suite, Linux, gdb, Valgrind, Git.</div>
