SAMUEL L. RANDALL

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I help teams use data, software and AI to solve technical and business challenges. I have expertise building automated pipelines for data analysis, training and integrating ML models into software, and using mathematical and computational techniques to solve hard problems. I also have experience creating business strategy and can advise business executives on technical matters.

Education

Stanford University, MS. Computational & Mathematical Engineering
DGSAC Exceptional Master's Student Award.

- Computational Geometry course with Dr. Leonidas Guibas.
- Robotics Research in Bohg Lab, Unsupervised Learning Research in Hazy Lab.

Johns Hopkins University, BS. Applied Mathematics and Public Health. Minor in Computer Science and Environmental Science.

Experience

BlueLightAI, *Principal Applied Scientist* January 2023 — Present

- Developed software algorithm (based in topological data analysis) to automatically identify systemic error patterns in ML models, resulting in improved operational efficiency for our team.
- Tested this algorithm on many fine-tuned Llama models, fine-tuned BERT classification models, fine-tuned ResNet, tabular ML models, exhibiting their time-saving success across many models.
- Planned & organized PoVs and technical deliverables in GTM, aligning the team around technical tasks that create value.

Athena Security, *iOS Engineer* 2020 – 2022

- Integration of sensors and ML model into MVP fever detection iOS app in 6 weeks.
- Engaged in rapid feedback loop with prospects & customers to engineer the product to suit needs, making necessary third-party integrations and satisfying new feature requests.

PHICOR, *Research Analyst* 2017 – 2020

- Scripted the execution & analysis of simulation runs; automating a labor-intensive process.
- Streamlined labor-intensive download / organization process of large (>1500 files) dataset.

Volunteer & Continuing Education

California Search & Rescue, *Duty Officer, General Member* 2022 — Present

- I receive the call from emergency service, dispatch the team & coordinate logistics.

Climate Change Solution-Oriented Reading Group, Cofounder 2023 — Present
Stanford University, *Sighted Running Guide for Visually Impaired Students* 2022 — 2023
Large Language Model (LLM) Reading Group, General Member 2023 — 2024

STEM Teaching & Tutoring Experience

Ordinary Differential Equations, *Course Assistant* 2022
Software Development for Engineers and Scientists, *Course Assistant* 2021
Juni Learning, *Computer Science Tutor for children aged 5-18* 2019 – 2020

Skills

SWE: Python, Java, Javascript, Swift, C/C++, PyTorch, git, Unix, CUDA, Data Structures, Algorithms.
Data: Machine Learning, Deep Learning, Computer Vision (CV), NLP, scikit-learn, LLMs.
Math: Graph Theory, Discrete Mathematics, Applied Topology, Computational Geometry, Convex Optimization.