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Samuel Sasaki

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Technical Skills

Languages: Python, JavaScript, TypeScript, Go, C++, Java, Swift, SQL, Bash, MATLAB, HTML/CSS
Libraries & Frameworks: React.js, React Native, Django, Django REST Framework, Node.js, Pandas, PyTorch, Numpy
Tools: Linux, Git, Docker, Ansible, CircleCI, AWS (EC2 & S3), Redis, Google Firestore, MySQL, PostgreSQL, Conda

Experience

Software Engineer — **Elementary ML** — **Jan. – June 2022**
- Improved reliability by updating the **Python** testing suite to handle product configurations in a simulated environment.
- Constructed an API to capture and write data originating from edge devices to a performance monitoring stream built on Redis and created a dashboard to display performance metrics of the hardware.
- Investigated performance of machine learning product based on run-time and latency metrics across the set of hardware specifications and motivated decision-making for future sprints with detailed reports of findings.

Software Engineer Intern — **Elementary ML** — **May – Aug. 2021**
- Increased flexibility in testing by adding an **Ansible** workflow that could run multiple testing configurations (CPUs, devices) at a time, which provided a more robust and streamlined CI/CD pipeline.
- Initiated the development of an internal code coverage comparison tool written in **Bash** and **Python** and architected an automated workflow for it on GitHub that brought awareness of 5+ repositories with code coverage less than 90%.

Research Assistant — **Pomona College** — **Sept. 2022 – Dec. 2022**
- Creating and training a computer vision model to inform robot movement and designing the architecture for model deployment.
- Contributed to a project on identifying locations on the Pomona College campus using a convolutional neural network by performing data collection, defining the network architecture, and executing model training.

Education

GPA: 4.0 — **Vanderbilt University** — **June 2023 – June 2027**
- **Ph.D. Student in Computer Science**. Member of the VeriVITAL lab **under the advisory of Dr. Taylor Johnson**.
- **Research interests include computer vision, formal methods in verification, safe autonomy, and explainable AI**. Dedicated to making machine learning systems more perceptive, reliable, and safe via analysis or advancements in deep learning theory.
- Actively researching methods of neural network verification and defense strategies against adversarial examples for deep learning computer vision systems.

GPA: 3.63 — **Pomona College** — **Sept. 2018 – Dec. 2022**
- Double major in **Computer Science**, **Mathematics**. Relevant coursework: Discrete Math, Theory of Computation, Algorithms, Advanced Linear Algebra, Computational Statistics, Data Structures, Neural Networks, Computer Architecture, Managing Complex Systems, Reinforcement Learning, Partial Differential Equations, Number Theory.
- **Awards**: Pomona College Scholar, SURP Grant Recipient, NCAA Postgraduate Scholarship Recipient, 2022 Pomona-Pitzer Male Student-Athlete of the Year.

Projects

Altr — **github.com/sammsaski/altr** — **Aug. 2023**
- A web app used to scrape and compare data of property listings across multiple popular real estate listing websites.
- This application uses a tech stack of Python, Streamlit, and Firestore. It was designed with object-oriented principles in mind allowing for easy codebase maintenance and reusability.

Wishlist — **github.com/sammsaski/wishlist** — **Aug. 2022**
- A wishlist app built with a Go backend, React frontend, PostgreSQL and Docker.
- This project was built to practice designing a RESTful API using Golang, as well as combining it with a React frontend.

Leadership Experience and Awards

NCAA Div. III – Pomona-Pitzer Varsity Men's Water Polo 4-Year Starter & Team Captain
- 2021 Division III National Champion, 2022 SCIAC Offensive Player of the Year, 3x First-Team All-American.