

Nicolás Kennedy

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A broadly curious and engaged researcher seeking meaningful work with driven and diverse teams and individuals! I have a passion for machine learning fairness, hardware design, applied mathematics and physics, which I balance with hobbies of martial arts and music.

SKILLS

Languages: C, C++, Rust, Python, Java, JavaScript, TypeScript, HTML, CSS, Scheme, SQL

Technical: PyTorch, Keras, Machine Learning, AWS, React.JS, Firebase, Electronics, Arduino, Algorithms and Data Structures, Linux System Administration (Debian, Alpine, NixOS, Gentoo)

Currently Learning: Modern Algebra, CUDA, Haskell, VHDL, Digital Circuit Design, RISC-V

PROFESSIONAL EXPERIENCE

Research Intern, University of California, Davis (Dr. Ian Davidson) | Sep 2023 – Present

- Invented and formalized unsupervised, performant dataset-agnostic systems that explain clusters using text tags
- Successfully increased fairness without human supervision while retaining high model performance
- Modified the Deep SVDD outlier detection system in PyTorch, adding a convolutional variational autoencoder
- Co-author on papers submitted to SIGKDD 2024 and AAAI 2025

SDE Intern, Amazon Web Services | June 2024 – September 2024

- Engaged customers directly to engineer and implement a full-stack network configuration logging & status system
 - Millions of internal datacenter network devices provisioned with assistance of tool
- Leveraged AWS Lambda, StepFunction, Route53, S3, and designed a new REST API for microservice communication
- Revamped the Web SaaS codebase by migrating 1,000 lines of UI code to TypeScript, enhancing maintainability
- Collaborated with teams to establish product design, technical decisions, and solve broad, vaguely-defined problems

Research Intern, MIT (Dr. Arvind Satyanarayan) | May 2021 – Aug 2021

- Orchestrated pipelines for machine learning experiments and automated research survey collection
 - I took initiative, developed procedures for interfacing with outdated batch compute clusters at MIT
 - Interfaced Linux systems together, proactively wrote documentation for team without explicit guidance
 - Automated research survey generation using Qualtrics, with parsing and storage
- Directed the usage of mission-critical tools for the whole team of Ph.D, M.S, B.S. students

Martial Arts Instructor, Vision Martial Arts | Jun 2018 – Oct 2019

- Broad responsibility: teaching and evaluating students for rank graduation, handling inquiries and walk-in visits
- Successful real-time negotiation with unhappy and occasionally hostile visitors and parents

PROJECTS / Open Source

Multiplayer Scalable Board Game, Personal Project, 2020

- Created a multiplayer rendition of the classic board game *Go* entirely in Rust
- Frontend written with Yew, multithreaded backend written from scratch with async Rust

Embedded Raytracing, Personal Project, 2020

- Wrote a ray-traced spinning torus in C that uses ASCII characters for shading, rendering into the console
- All mathematics (trigonometry, square roots) implemented from basic arithmetic using numerical approximations

Retrofitting Thinkpads, Personal Project, 2018 - Present

- Flashing custom Coreboot firmware to capable Thinkpads with external soldering, disabling the Intel Management Engine, configuring custom Linux kernels with Gentoo (Achieved RAM usage down to 60 MB on login)

Linux Package Maintainer, Open Source, 2021 - Present

- Became the maintainer of a VEIKK graphics tablet driver package for NixOS after finding it was not available
- Collaboration with thousands of other maintainers and also distribution admins to keep the system functional

EDUCATION

UNIVERSITY OF CALIFORNIA, DAVIS | GPA: 3.97 | Sep 2022 – Jun 2025

B.S. Computer Science and Engineering (Dean's Honor List)