

# Christopher Milan

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## contact

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## education

**University of California, Los Angeles**, Los Angeles, CA  
B.S. in Computer Science  
B.S. in Mathematics

Sep 2021 – June 2025

## coursework

\* = in progress  
† = honors  
‡ = graduate level

Linear Algebra<sup>†</sup>  
Numerical Analysis<sup>†</sup>  
Real Analysis<sup>†</sup>  
Abstract Algebra<sup>‡</sup>

Machine Learning  
Hardware For Machine Learning<sup>‡</sup>  
Foundations of Cryptography<sup>†</sup>  
Cryptographic Protocols<sup>\*‡</sup>

Programming Languages  
Operating Systems  
Computer Networking  
Computational Imaging<sup>\*‡</sup>

## experience

**ference**, Boston, MA

*Data Science Intern*

June 2024 – September 2024

- Collaborated with researchers, assisting with analysis of electronic health record data.
- Utilized tools such as **pandas/polars** and **lifelines** for time-series statistical analysis.
- Designed a bespoke natural language processing pipeline for extracting special EHR features.
- Optimized post-processing algorithms efficiently sort through **millions** of patients.

**UCLA Cardiac Arrhythmia Center**, Los Angeles, CA

*Research Intern*

January 2023 – June 2024

- Analyzed 12-lead EKG data using vectorcardiograms.
- Detected Premature Ventricular Contractions using wavelet transform.
- Designed bespoke system for  $\mu$ -CT scan analysis for detecting and counting blood vessels with Computer Vision techniques.

**AI Safety at UCLA**, Los Angeles, CA

*President*

January 2023 – present

- Ran and managed club responsibilities, organizing fellowships and upskilling programs.
- Built and administrated for 4-system GPU cluster, with synchronized NFS and user management with LDAP (see blog posts at [blog.aisafetyat UCLA.org](https://blog.aisafetyat UCLA.org)).
- Provided support for over 50 active users: NVIDIA CUDA usage to general Linux support.
- Wrote and facilitated "Introduction to AI Safety" fellowship curriculum.

**Verve Therapeutics**, Boston, MA

*Intern*

June 2020 – August 2020

- Researched gene therapy treatments: CRISPR and base editing.
- Examined vectors for gene therapy therapeutics, such as AAV and lipid nanoparticles.

## projects

**cherf**—NAT Tunneling Protocol

- Facilitates connection of fully peer-to-peer TCP sockets, implemented purely in Haskell.
- TLS-encrypted signalling protocol, with full client and server host authentication.
- Protocol extends to universal p2p networking client, locating peers by unique SHA hash.
- Documentation and protocol specification at [cherf.ais-ucla.org](https://cherf.ais-ucla.org)

**AI Safety Cluster**

- Built cluster consisting of 4 servers: 3 GPU servers with a total of 14 NVIDIA 3090s, powered by AMD EPYC 7002 processors and 1 bastion server running FreeBSD.
- Bastion server hosts shared NFS to mirror user files across all four servers, as well as a centralized LDAP user authentication server.
- Provides GPU resources 24/7 for over 50 users.
- More information available at [stats.ais-ucla.org](https://stats.ais-ucla.org)

## languages & technologies

Python, C, CUDA C++, Haskell, OCaml, Rust, Bash, X86(64) Assembly  
LLVM, PyTorch, Nsight Compute, Git, OpenLDAP, OpenZFS, Xilinx Vivado