Christopher Milan

contact

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education

University of California, Los Angeles, Los Angeles, CA
B.S. in Mathematics of Computation — Sep 2021 – June 2025
GPA: 3.54/4.00

coursework

∗ = in progress
† = graduate level

Abstract Algebra (Honors)	Real Analysis (Honors)	Complex Analysis (Honors)*
Linear Algebra (Honors)	Numerical Analysis (Honors)*	Optimization
Algorithms & Complexity	Machine Learning*	Hardware For Machine Learning†*
Probability & Statistics	Computer Organization	Discrete Structures

experience

UCLA Cardiac Arrhythmia Center, Los Angeles, CA
Research Intern — January 2023 – present

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

DataRes at UCLA, Los Angeles, CA
Internal Vice President — September 2022 – present

- Overseeing Consulting, Visualization and Research club branches.
- Working with team of fellow students to explore novel areas in artificial intelligence.
- Directed Research Team in researching Geometric Deep Learning.
- Implemented Transfomer based models for video human action recognition.

AI Safety at UCLA, Los Angeles, CA
Alignment Researcher — January 2023 – present

- Designed and successfully trained Machine Learning model to detect model tampering through trojan injection.
- By processing model activations, designed a meta-model to automatically determine if an output is out-of-distribution, and thus a trojan.
- Completed introductory fellowship in AI Safety principles.

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.
- Learned from CEO and Founder, Sekar Kathiresan, business skills and technical knowledge.

projects

WebGrad — January 2023 – present

- Implemented zero-dependency autograd engine in JavaScript.
- Provided reference implementation of Multi-Layer Perceptron, with ReLU nonlinearities.
- Designed reactive React.js visualization tool.

16-bit Breadboard Computer — September 2019 – June 2020

- Designed to use TI Transistor-Transistor Logic integrated circuits.
- Built to run on x86-16 Von-Neumann architecture, emulating an Intel 8086 processor.
- Gained valuable knowledge in low-level computing and bare-metal execution, through compilation, assembly, and machine code.

languages & technologies

Python, JavaScript, C/C++, Go, Rust, Java, HTML/CSS, Assembly
PyTorch, Tensorflow, Vue.js, React.js, Express.js, Git, Jupyter/IPython, EAGLE, KiCad