Manuel Sabin, Ph.D.

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About: Ex-academic (expertise in Crypto & ML) turned software engineer who cares about building delightful tools for users and sound infrastructure for the world, centering accessibility, performance, security, & testability

Skills: C, CSS, Express.js, git, Go, HTML, Java, JavaScript, Linux, MATLAB, MySQL, Node.js, Python, R, React.js, Sass, socket.io, Tailwind, TypeScript, Unix, WebAudio, WebMIDI, WebSocket

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Career Highlights

Impact: Published first provably secure Proofs of Work. Contributed security-critical features to the Go standard library. Published in top Crypto, CS Theory, and ML conferences (ALT, CRYPTO, STOC) with ∼375 citations.

Leadership: Organized workshops (∼800 attendees) and served on panels and publishing committees at premiere ML venues (CVPR, FAccT*, ICML, NeurIPS). Secured ∼$160K grant for Cryptography research.

Communication: Invited to present my work at 20+ venues (e.g. MIT, Stanford, UC Berkeley). Interviewed by media outlets (e.g. MIT Tech Review, Nature, & was a prominently featured expert in Simons Institute short film).

Software Engineering Experience

Lycalopex Fellowship, Software Engineering Fellow   Jun 2024 - Jul 2024

Competitive paid fellowship to contribute to the official Go cryptography library

- Created the new cryptotest package introducing reusable testing suites for Go's crypto library
- Merged a testing suite for each interface of Go's 5 core secret-key primitives in 5 weeks, spanning 60+ tests
- Caught a security bug in the CTR mode stream cipher that my tests uncovered and filed an issue

Recurse Center, Software Engineer in Residence   Aug 2023 - Oct 2023

A self-directed residency for software engineers (from juniors to CTOs) to collaborate and hone their craft

- Built interactive DSP web apps with React and WebMIDI/WebSockets and music software with Python
- Initiated & led weekly workshops on dev tooling, web accessibility and WCAG 2.1 compliance (47% increase in Lighthouse scores across projects), and ran sprints for bite-sized web projects for a team of 7

EduExplora, Instructor and Program Creator   May 2023 - Jul 2023

UC Berkeley STEM outreach program for exceptional international high school students from Latin America

- Created & taught an Introductory Python course on Object-Oriented design and physics simulations
- Coached 30 student developers on utilizing documentation, debugging, and pair programming

Radboud and VUB Universities, ML Consultant and Researcher   May 2020 - Jan 2021

Consulted on modern ML-based Legal Tech for competitive ERC-funded COHUBICOL Project

- Surveyed existing Legal Tech and documented a vocabulary of technical concepts at the intersection of ML and Law, improving legibility and testability of these technologies for lawyers and legal philosophers
- Trained a team of lawyers on fundamental ML topics and mentored a CS PhD student

Education

UC Berkeley, PhD Computer Science   Aug 2020

CSU Sacramento, BA Math & CS; Minor in Statistics *(Commencement Speaker)*   May 2014