

Melinda Chang

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RESEARCH INTERESTS

- Programming languages, compilers, type systems
- Language-based security, defensive computing
- Cultural analytics, literary theory, critical and cultural studies

Education

2024–Present

B.A., Computer Science & Comparative Literary Studies

Northwestern University, Evanston, IL

GPA: 3.79, Dean's List (2 quarters)

Selected Experience

2025–Present

UNIVERSITY OF CALIFORNIA, BERKELEY

Undergraduate Researcher, School of Information

Advisor: Prof. Timothy Tangherlini. Exploring the affordances of language models in apprehending literary narratives with high social complexity.

Berkeley, CA

2023–2024

UNIVERSITY OF CALIFORNIA, SAN DIEGO

Student Researcher, Programming Systems Group

Advisor: Prof. Michael Coblenz. Toward ergonomic programming languages and software processes for computational climate scientists.

La Jolla, CA

2022

UNIVERSITY OF CALIFORNIA, SAN DIEGO

Research Assistant, Laboratory for Computational Astrophysics

Advisor: Prof. Michael Norman. Systems programming to support analysis of dark matter halos in early universe simulations.

La Jolla, CA

2022

HACK CLUB

Software Engineer Intern

Building web tooling for JavaScript-based game engine.

Shelburne, VT (Remote)

Publications

2024 Elizaveta Pertseva, *Melinda Chang*, Ulia Zaman, Michael Coblenz. [A Theory of Scientific Programming Efficacy](#). ICSE 2024 [International Conference on Software Engineering].

Awards & Grants

2024 National Merit Finalist.

2023 4th Place in Computational Systems & Analysis, *California Science & Engineering Fair*.

2023 1st Award in Computer Science & Systems Software, *Greater San Diego Science & Engineering Fair*.

Service

2025–Present *Staff Writer*, Responsible AI Student Organization (RAISO)
On current events in artificial intelligence ethics, tech policy, and computing culture.

2025–Present *Founder & Editor-in-Chief*, Critical Culture Undergraduate Journal
Northwestern's premier undergraduate venue for critical writing.

2024–Present *Director of Technology*, WildHacks
Leading software development at the largest collegiate hackathon in Chicagoland.

2021–2024 *Outreach Volunteer*, San Diego Astronomy Association

2023 *Founder & Director*, Hack the Wave
Organized San Diego County's biggest-ever high school hackathon.

Selected Projects

2022–2023 [Albio](#). Lightweight JavaScript compiler to enable reactive web programming directly in markdown. Outperforms Virtual DOM-based frameworks like React, Vue in key benchmarks.

Selected Skills

TypeScript, React, Svelte, SASS, Tailwind · Rust · C/C++ · Python · Java · ELisp · Linux, Bash, Git.

Relevant Coursework

Data Structures & Algorithms · Intro to Literary Theory · C/C++ Programming · Intro to Functional Programming · Intro to Computer Systems · Intro to AI · Multivariable Calculus · Linear Algebra.