Melinda Chang

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melindachang.com
github.com/melindachang

RESEARCH INTERESTS

- Natural language processing (NLP), computer vision, cultural analytics

- Programming languages, software engineering

- Literary theory, aesthetics, critical and cultural studies

Education

2024–Present

B.A., Computer Science & Comparative Literary Studies
Northwestern University, Evanston, IL
GPA: 3.73, Dean's List (1 quarter)

Selected Experience

2025–Present

UNIVERSITY OF CALIFORNIA, BERKELEY
Undergraduate Researcher, School of Information
Advisor: Prof. Timothy Tangherlini. Apprehending narrative in the Icelandic saga with literary-theoretical and computational methods.
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	*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, Vite in key benchmarks.

Selected Skills

TypeScript, React, Svelte, SASS • Rust • C/C++ • Python • Java • Haskell • UNIX, Bash, Git.

Relevant Coursework

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