Melinda Chang

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melindachang.com
github.com/melindachang

Research Interests

- Cultural analytics, computational humanities, heritage informatics
- Natural language processing (NLP), computer vision, artificial intelligence ethics
- Programming languages, human-computer interaction

Education

2024–Present **B.A., Computer Science & English Literature**
Northwestern University, Evanston, IL
GPA: 3.73, Minor in Film Studies

Selected Experience

2025–Present University of California, Berkeley
Undergraduate Researcher, School of Information
Advisor: Prof. Timothy Tangherlini. Modeling narrative events and character interaction networks in the Icelandic saga.
Berkeley, CA

2023–2024 University of California, San Diego
Student Researcher, Programming Systems Group
Advisor: Prof. Michael Coblenz. Towards sensible, 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 infrastructure 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*.

Selected Projects

2022–2023 *Albio*. Lightweight JavaScript compiler to enable reactive web programming directly in markdown. Outperformed Virtual DOM-based frameworks like React, Vite in key benchmarks.

Selected Skills

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