Andrew Chang-DeWitt

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andrew-chang-dewitt.dev

Experienced Software Engineering Intern & Computer Science student with a passion for pl theory & shipping clean, well-tested software. Currently seeking a junior engineering position with a team that values mentorship, learning, & collaboration.

Education

Bachelor of Science in Computer Science

Illinois Institute of Technology, Chicago, IL, May 2026

Completing coursework on CS & SWE fundamentals, including data structures, algorithms, systems programming, pl theory (paradigms, language design), compiler engineering, & database organization w/ special interests in mathematics & pl theory.

Experience

Illinois Institute of Technology

Undergraduate research assistant, May 2025 - August 2025

Skills developed: sml | ocaml | functional programming | compiler development | language design | teamwork | research

- Collaborated with lead research professor to implement support for condition variables to PriML, a functional research language aimed at eliminating priority inversions in multi-threaded programming
- Researched dataflow analysis techniques used by Rust language for implementing the borrow checker & non-lexical lifetimes
- Added new langauge features to the tokenizing & parsing stages of the primlc compiler
- Created generic dataflow analysis framework to support condition variable ownership analysis & future optimizations & analyses

Northwestern University

Undergraduate research assistant, March 2024 - June 2024

Skills developed: racket | unit testing | llm integration | teamwork | research

- Worked in a programming language research lab focused on exploring tools to improve developer experience and increase code correctness by reducing the friction of introducing types and/or testing contracts to previously untyped and/or untested code bases.
- Assisted in the beginning stages of creating an LLM-based tool for generating test suites capable of capturing a high degree of possible bugs for a given software source
- Researched fuzzing techniques to use in tandem w/ AI test generation to hopefully improve the generated tests

Tinder

Web Engineering Intern, _June 2022 - Jan 2023_

Skills developed: typescript | react | redux | nodejs | github | automated unit testing | ci systems | user studies | collaboration | communication | project planning

- Collaborated w/ senior engineers in fast-paced, agile dev cycles to rapidly design, develop, test, review, & release new features & analyze experiments for market testing
- Led implementation planning for & worked with a cross-disciplinary, remote-first team including engineering, product, & design to develop a new feature shipped on Tinder's web app in late Q3 of 2022, impacting tens of millions of users
- Assisted in migrating JavaScript typed in Flow to TypeScript across the application
- Improved the Web experience for tens of millions of users by identifying & shipping fixes for a11y & i18n bugs

Indiana University

Assistant Web Master, _Aug 2021 - June 2022_

Skills developed: c# | .net | javascript | vue | html | css | communication

- Updated outdated .NET Razor views from Bootstrap/JQuery to Indiana University's modern css framework, improving page load times
- Implemented additional features in HTML, CSS, & vanilla JS (or Vue, where applicable)
- Built dev tools in Python & TypeScript to automate data & file collection & formatting

Skills

- **languages:** - rust - python - c - typescript - javascript - racket - haskell - sml - ocaml - java - assembly
- **tools & libraries:** - git - github - bash - postgres - mysql - nodejs - leptos - llm integration - fastapi - react - redux - html - css
- **concepts:** - object-oriented programming - functional programming - data structures - algorithm design & analysis - compiler development & analysis - systems programming - unit testing - end to end testing - restapi design - library api design - relational database system design
- **soft skills:** - project planning - agile/scrum methodologies - communication - coaching & mentorship - teamwork