

# Ethan Zhang

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## EDUCATION

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### University of Illinois Urbana-Champaign

*Bachelor of Science, Mathematics & Computer Science, GPA: 4.0/4.0*

**Champaign, IL**

May 2027

**Related Coursework:** Programming Languages & Compilers; Intro to Algorithms & Models of Computation; Data Structures; Systems Programming; Abstract Algebra; Real Analysis; Probability Theory; Topics in Automated Deduction.

## SKILLS

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**Languages:** C++, Rust, Haskell, OCaml, C#, Typescript, Go

**Tools:** Linux, Bash, Git, Vim, CMake, GNU Make, L<sup>A</sup>T<sub>E</sub>X

## EXPERIENCE

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### Google

*Associate Software Developer Intern*

**Cambridge, MA**

May 2025 – August 2025

### John Deere

*Software Engineering (IT) Intern*

**Urbandale, IA**

May 2024 – August 2024

- Developed machine & device compatibility flows for a Node.js microservice in the license management system, implementing logic for selecting features and delivery methods based on device specifications.
- Maintained and built features for the license purchase & assignment flows in a full-stack React application.
- Collaborated with Deere's Okta team and Zuora support to enable Single Sign-On (SSO) and user/group provisioning, streamlining access management for the licensing and sales teams.
- Followed the Scrum framework, participating in daily stand-ups, backlog refinement, sprint retrospectives, and sprint reviews.

### University of Illinois Urbana-Champaign

*Course Assistant*

**Champaign, IL**

January 2024 – Present

- Course assistant for CS 173: Discrete Structures.
- Graded honors homework assignments and fixed bugs in the Haskell autograder.
- Wrote problems for the Spring 2024 final exam.
- Assisted students with problem sets during weekly tutorial sections and office hours.

## PROJECTS

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### sway-easyfocus

- Designed a command-line tool in Rust for efficient window focusing in the Sway window manager, communicating with Sway through an IPC socket and rendering window hints via gtk-layer-shell.
- Achieved recognition with 16 stars on GitHub, over 5,200 downloads on crates.io, and inclusion in the Nix package repository.

### power-profiles-applet

- Developed a Gtk-based systray applet in Rust to manage power profiles on Linux.
- Interfaced with the freedesktop project's power-profiles-daemon, a power management solution that is pre-installed on many Linux distributions.

### TCPProxy

- Collaborated in a team of four to develop a performant TCP reverse proxy written in Rust.
- Led the design of a domain-specific configuration language for defining filter rules and the implementation of its associated compiler.