ELLIOT BOBROW

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EDUCATION

Harvey Mudd College — *B.S. Computer Science and Mathematics*
Expected graduation May 2027

SKILLS

Languages: Rust, Coq, Haskell, Racket, Java, JavaScript, TypeScript, Python, HTML, SQL, x86_64 Assembly, Prolog, APL, Mathematica.

Technologies: Microsoft Office, Figma, Linux, Vim, LaTeX, React, Node.js, Docker, Pandas, NumPy, Git, Handlebars.

EXPERIENCE

UPenn REPL — *Research Student*   **May 2024 - August 2024**
- Worked with Professor Stephanie Weirich and PhD student Yiyun Liu on formalizing σ-calculus semantics and logical relations in Coq
- Took accelerated introduction to Coq and Programming Languages with other students
- Participated in weekly reading club of important papers in the field, leading discussion on linear logic
- Attended weekly seminars and PLClub meetings to learn about current research, culminating in REPL students presenting our work at PLClub

`Coq`

Bluestone Health — *Intern*   **June 2023 - July 2023**
- Performed competitive analysis and research to help pick new electronic medical records system.
- Wrote scripts to analyze monthly client data, saving about 3 hours per month.
- Tested web app.
- Worked on UI/UX redesigns, designed promotional content, flyers, and bio sheets.

`Python  /  Excel  /  Figma`

Rust Clippy — *Open Source Contributor*   **March 2021 - March 2023**
- Collaborated with developers around the world on the official linting tool for Rust, with over 10,000 stars on GitHub.
- Fixed bugs, added features, and suggested improvements.

`Rust  /  Git`

USC SHINE — *Research Assistant*   **June 2022 - July 2022**
- Worked with graduate student and professor in their lab.
- Used unsupervised machine learning to cluster single-cell RNA sequencing data.
- Presented poster at poster session; poster available at https://viterbik12.usc.edu/wp-content/uploads/2022/08/S22-Bobrow-E-Poster-Final.pdf.

`Python  /  NumPy`

SmartSoft — *Intern*   **July 2021 - August 2021**
- Performed competitive analysis, sat in on developer meetings.

`Excel`

Schoop — *Assistant Full Stack Developer*   **February 2021 - May 2021**
- Worked on a webapp with another student from my highschool to store student class schedules.
- Learned to navigate existing codebase, communicated with lead developer.
- Added integration with Google Calendar to retrieve and display additional events such as meetings.

`Javascript  /  Node.js  /  Handlebars  /  SQL`

PROJECTS

Racket to x86_64 Compiler   **https://github.com/ebobrow/rompiler**
- Compiler written in Rust that parses Racket expressions and outputs NASM-flavor x86_64 Assembly.

SQL Clone   **https://github.com/ebobrow/sequel**
- Mini SQL clone written in Rust that runs over TCP.
- Parses SQL queries into Abstract Syntax Trees and stores and retrieves data.

What's Appening   **https://github.com/ebobrow/chatapp-server, https://github.com/ebobrow/chatapp-client**
- Chat app with instant messaging and friend requests.
- TypeScript React frontend and TypeScript Node.js backend with PostgreSQL database.
- Uses Socket.IO for chat.