

EDUCATION

University of Rochester

Rochester, NY

Bachelor of Science, Computer Science. Bachelor of Arts, Political Science

Expected May 2025

- GPA 3.93 out of 4.00. Dean's List all eligible semesters.
- Expected Honors in Computer Science and Honors in Political Science

EXPERIENCE: Internships

CommonLit

Washington, DC

Software Engineering Intern

May 2023 – August 2023

- Implemented security requirements to comply with the SOC-2 audit, including integrating OAuth into the organization-wide admin dashboard and location- and role-based controls on data access.
- Fixed security vulnerabilities leaking sensitive educational information.
- Designed and implemented application-wide automated accessibility testing.

JusticeText

Boston, MA

Software Engineering Intern

May 2022 – August 2022

- Engineered highly-requested features and bug fixes for the JusticeText platform, an evidence-management software for public defenders, including scalable search reindexing, edit history and backups, streamlined notifications, and user payment history.

Red Hat

Boston, MA

Software Engineering Intern

May 2021 – August 2021

- Implemented key features for ChRIS, a medical technology application, and Mass Open Cloud Curator, a public cloud computing platform, including a graphical interface to simplify data processing pipelines, browser-based viewers for medical data files, and server usage visualizations.

EXPERIENCE: University of Rochester

Computational Social Choice Research Group

Rochester, NY

Research Assistant

September 2023 – Present

- Worked under Professor Lane A. Hemaspaandra on research in Computational Complexity and Computational Social Choice.
- Collaborated with a team of graduate and undergraduate students on two critiques of scientific papers, which explored the relationship between CSPs, 3SAT, and the polynomial hierarchy.

Political Science Department

Rochester, NY

Teaching Assistant

January 2023 – May 2023

- Led recitation group for Argument in Political Science course, met with students individually to teach course material.
- Collaborated with undergraduate TAs and Professor Gerald Gamm to grade papers and manage class logistics.

Horizon Research Lab

Rochester, NY

Research Assistant

January 2022 – May 2023

- Engineered an interactive virtual reality viewer for Resurrect3D, a browser-based modeler.
- Integrated and extended a raytracing-based neighbor-search algorithm with Triforce, a physics simulation engine.

RocLab (Student-Led Software Consultancy)

Rochester, NY

Full-Stack Software Engineer

January 2023 – May 2023

- Engineered an interactive virtual reality viewer for Resurrect3D, a browser-based modeler.
- Integrated and extended a raytracing-based neighbor-search algorithm with Triforce, a physics simulation engine.

Computer Science Department

Rochester, NY

Teaching Assistant

January 2023 – May 2023

- Led workshop group for Data Structures and Algorithms course, teaching topics including asymptotic analysis, recursion, dynamic programming, graphs, trees, and other data structures.

EXPERIENCE: Freelance

OBR Investing

April 2023

Freelance Software Engineer

- Identified and fixed software errors in a Discord bot that prevented new customers from signing up.

Torah Godly Play

November 2022 – December 2022

Freelance Web Designer

- Created a 15-page Squarespace website, managed domains and payments

AndrewPessin.com

May 2021 – June 2021

Freelance Web Developer

- Designed and developed a custom WordPress website for author Andrew Pessin.

Gabe's Bar Mitzvah Website

May 2021 – June 2021

Freelance Web Developer

- Designed and developed a single-page invitation website for a Bar Mitzvah Event.

Mind App

February 2022 – May 2022

Freelance Mobile App Developer

- Engineered new features and bug fixes for Mind App, a React Native-based athlete mental health tracking app.

Riverside Lactation Center

April 2021

Freelance Software Engineer

- Engineered backend solution to parse, format, and deliver custom patient form data to medical specialists.

Programming Tutoring

Fall 2020

- Planned and taught one-on-one tutoring sessions for middle schoolers, focusing on web design and development

Harlow Group

June 2016 - August 2016

Freelance Systems Administrator

- Migrated two websites to HTTPS by installing SSL certificates and transitioning WordPress installations.

Temple Beth Shalom

May 2019 - June 2019

Freelance Software Engineer

- Migrated two websites to HTTPS by installing SSL certificates and transitioning WordPress installations.

Family Law Software

May 2017 - June 2018

Freelance Web Developer & Email Marketer

- Designed and developed a modern, responsive redesign of a public-facing website with dozens of pages.
- Integrated modern technology with legacy backend.
- Created an email marketing campaign of twenty emails; wrote marketing text, designed email layout, and managed a database of email addresses.

EXPERIENCE: Volunteer

RagTag

January 2021 - May 2021

Volunteer Web Developer

- Implemented key components for a custom Wordpress theme for FreeFrom, a domestic-violence victims support organization.

Jewish Community Day School of Boston

June 2019 – December 2021

Volunteer Educator & Technology Consultant

- Designed and co-taught a two-year middle-school elective programming course. Created instructional material and led students through the conceptualization, design, and implementation of programming projects.
- Created custom technology solutions for attendance sheets, report card parsing, and other school administration requirements.
- Provided technical support and consultation for virtual-reality learning experiences.

Code for Boston

May 2020 – September 2020

Volunteer Software Engineer

- Worked with a team of volunteers to contribute new features and bug fixes to the Social Security Benefit Calculator, a civic technology project backed by Congressman Seth Moulton.

Code for Social Good

April 2017 – December 2018

Volunteer Software Engineer

- Contributed to a WordPress website encouraging young women to explore computer science; created custom pages, managed plugins, users, WordPress installations, database configurations, and domains.

Association for the Social Scientific Study of Jewry

March 2018 – May 2018

Volunteer Software Engineer

- Designed and built a new website for the organization, migrating all content from the previous website and integrating with a legacy backend.

PROJECTS

Mock Trial Timekeeper React Native mobile application with over 1,200 users, which simplifies and automates a core part of collegiate mock trial tournaments.

Mock Trial Rules of Evidence SwiftUI mobile application with over 900 users, with features including content-aware search and dynamically updated information.

MyGann+ A browser extension that adds over thirty new features to Gann Academy's learning management system, used by over 90% of students and numerous faculty.

Unicycle Worked with a four-person development team to create a campus-based e-commerce web application with over 75 users.

T'Feeling A web application which encourages people to make, share, and be inspired by connections between t'fillot (Jewish prayers) and their emotions. Winner of honorable mention, Powered by Sefaria Contest 2020.

Drive Organizer A web application which enables users to rapidly organize files in Google Drive.

LEADERSHIP EXPERIENCE

University of Rochester Mock Trial

Rochester, NY

- Vice President (2023-2024): Supported the president and the executive board in accomplishing the competitive, educational, and social goals of the seventy-member, nationally-ranked organization.
- Team Captain (2023-2024): Co-captained two teams through four competitions. Led weekly practices, education for new members, and competitive strategy.
- Tournament Director (2022-2023): Organized 250+ person tournament, managing dozens of team members and volunteers.

Gann Academy Red Curtain Drama Club

Waltham, MA

- Technical Director (2019-2020): Recruited and oversaw all crew members for two theater productions; helped organize and lead weekly club meetings.

PUBLICATIONS

Yumeng He, Matan Kotler-Berkowitz, Harry Liuson, and Zeyu Nie, "Disproving 'A polynomial time algorithm for 3-SAT'". ArXiv, 2023.

Michael Chavrimootoo, Yumeng He, Matan Kotler-Berkowitz, Harry Liuson, and Zeyu Nie, "Evaluating the Claims of 'SAT Requires Exhaustive Search'". ArXiv, 2023.

Matan Kotler-Berkowitz and Elijah Wiesman, "Inconsistent With Youth: Equal Protection, Cruel and Unusual Punishment, and the Issue of the Incurability Standard". University of San Francisco Law Review Forum, 2020.

Joshua Dankoff and Matan Kotler-Berkowitz, "Too Blue: A Vision for Non-Police Responses to Community Incidents in Boston". Citizens for Juvenile Justice, 2020.

TECHNICAL SKILLS

HTML, CSS, JavaScript, TypeScript, ReactJS, React Native, NodeJS, Java, Ruby on Rails, PostgreSQL