

# Darya Kaviani

daryakaviani.com | linkedin.com/in/darya-kaviani-674140142/ | (408)-833-8655 | daryakaviani@berkeley.edu | github.com/daryakaviani

## EDUCATION

### University of California, Berkeley

B.S. Electrical Engineering & Computer Science (Honors), Ethnic Studies Minor

Aug. 2019 – Aug. 2022, GPA: 3.893

*Organizations & Awards:* EECS Honors Program, Blockchain at Berkeley, Accel Scholars Fellowship, Paradigm Fellowship (top 2% of applicants), Center for Society Technology & Policy Fellowship, Computer Science Mentors, Dean's Honors List (College of Engineering)

## EXPERIENCE

### Research & Development Engineer | UC Berkeley Sky Lab

Nov. 2022 – Present

- Building DoTS, a distributed trust stack for developing & deploying distributed trust applications. Advised by Prof. Raluca Ada Popa.
- Integrated a Rust implementation of a multi-party threshold signing protocol. Peer-to-peer communication rounds occur over TCP.
- Co-designing an on-demand distributed trust architecture by conducting multi-party-computation protocols via AWS serverless lambda functions for cost-efficient "MPC in the clouds."

### Smart Contract Engineer | Oplyn

May 2022 – Oct. 2022

- Oplyn is the first DeFi options protocol which invented Squeeth, the first power perpetual (perpetual with exponential leverage).
- Designed mech & wrote smart contracts for the short-volatility Bull Strategy, which can earn ETH returns even in downturning markets using a delta-neutral strategy & lending protocol. Nonces & ECDSA signatures prevent replay attacks & ensure bid integrity.
- Created an API to optimize liquidity providing on Uniswap by batching intricate flows in a single transaction.

### President | Blockchain at Berkeley

Sept. 2019 – May 2022

- Led ~100 active members crafting industry-leading products blockchain companies, educational content used by 200K students worldwide & led launch of grants program to distribute \$250K in grants to student founders.
- Founded the Research, DE&I (Diversity, Equity, & Inclusion), & Internal (Operations, Social, & Finance) departments.
- Led & built projects with UNICEF (DeFi protocol prototype for newly Internet-connected schools) & Oasis Labs (API integration).

### Software Engineering Intern | Facebook

June 2021 – Aug. 2021

- Managed, designed, & created a full-stack surface redesign of the Community Help Page on Comet (Facebook's web interface). Revamped features for creating & contributing to drives, peer-to-peer community requests & offers, & volunteering opportunities.
- Used React.js for frontend, GraphQL & Relay for queries, & Hack/PHP for backend.

### HCI Undergraduate Researcher | UC Berkeley School of Information

Dec. 2020 – Jan. 2022

- Advised by Prof. Niloufar Salehi, performed research in social computing & Human-Computer Interaction. See Publications.

### FBU Engineering Intern | Facebook

June 2020 – Aug. 2020

- Created Writivist, a mobile application that streamlines contacting elected officials to make civic involvement accessible. Includes a Template Library, a find my representatives map, & robust email automation.
- Coded in Objective-C using a Parse backend & the Google Civic API for representative information.

### Academic Intern & Mentor | UC Berkeley EECS Department

June 2020 – Dec. 2021

- Assisted undergraduate students by explaining concepts & debugging for CS 61B, UC Berkeley's Data Structures course.
- Taught workshops & 10 students in weekly tutoring sessions for CS 61B (Data Structures) & CS 61C (Computer Architecture).

## SELECT PROJECTS

### Sharding of Level DB: Improving Write Performance of Ethereum

Jan. 2022 – May 2022

- Sharded Ethereum's Level DB into 2 memtables to combat write amplification. Compartmentalizing data storage increased write-speeds by 48%, 27%, & 24% for sequential fills, random fills, & overwrites by improving GET, PUT, & COMPACT operations.

### Satchel

Nov. 2021 – May 2022

- Satchel is an open-source dApp that banks underbanked school communities by facilitating locally-governed projects & bootstrapping capital through DeFi-powered donations & financial primitives (loans, savings accounts, decentralized governance).
- Coded in React.js & web3.js for frontend, Aave as Ethereum-lending protocol, Solidity for smart contracts, & MetaMask for auth.

## PUBLICATIONS

### Bridging Action Frames: Instagram Infographics in U.S. Ethnic Movements | iSchool

April 2022

- First-authored ACM CSCW paper showcasing that Instagram Infographics in ethnic movements bridge connective & collective action by enabling scope for education, reconciliation for credibility, & high-resource efforts for transformative change.
- Used iterative coding to juxtapose the insights of past & present activist interviewees, & OpenCV computer vision library for data analysis on changes in the Black Lives Matter Instagram page.

### How Reliance on Scalable Technology Skews the Values of Mutual Aid Groups in Practice | iSchool

In Review (ACM CHI)

- Interviewed mutual aid groups & performed grounded theory analysis to explore how scale-based mutual aid technologies create tensions with traditional mutual aid values of solidarity, trust, & security.

## SKILLS & INTERESTS

**Skills:** Rust, Java, Python, SQL, C, Spark, HTML/CSS/JavaScript, React.js, Blockchain, Farsi, Public Speaking, iOS (Objective-C), REST-APIs, Parse, Truffle, Ganache, Solidity, GraphQL, Relay, Hack/PHP, Mercurial, Hardhat, Foundry

**Interests:** 10-year Guild Repertoire Certified Pianist, Skiing, Security, Social Justice, Teaching, Making Colorful To-Do Lists