

# Derek Zheng

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## Education

### Harvard University

Expected May 2023

A.B. in Computer Science & Economics

Coursework: Data Structures & Algorithms, Systems Programming, Big Data, Linear Algebra

Activities & Awards: Research Assistant at Harvard Kennedy School, Effective Altruism Board Member, Harvard Computer Society Tech for Social Good, MakeHarvard Board, High School Heisman Scholar

## Skills & Projects

Programming languages: C++, Java, Python, HTML, CSS, JavaScript, TypeScript, SQL

Software & Technologies: Microsoft Office, GSuite, VSCode, Jira, Figma, GitHub, Adobe Creative Cloud

*WeensyOS*, an operating system design project employing memory isolation and allocation, forking & exiting processes, systems calls, and kernel privilege built on Linux x86-64 architecture, written in C++.

*Monta Vista Official*, an official school iOS App with 600+ downloads, utilizing Google Calendar API.

## Experience

### Pakira, Inc.

Cambridge, MA

Founding Software Engineer

November 2019 – Present

- Design and implement B2B physical commodities trading marketplace using TypeScript and React.js.
- Engineer core chat functionality, build and consume custom REST API routes, implement SQL queries, and define database schemas in MongoDB using fp-ts, TypeORM, Fastify and Socket.io libraries.
- Architect reCAPTCHA protection feature, build back-end user validation program to protect core user information. Implement user tests, build product specifications and development timeline.
- Lead construction of seed dataset utilizing R and Python to clean data from 250k+ companies.

### Boston Housing Authority

Boston, MA

Software Engineering Intern

March 2020 – June 2020

- Develop [online housing search tool](#) to support housing search process for low-income Boston families, integrating research report analysis to make key design choices and develop new product features.
- Augment website functionality by integrating 3 new API services including Google Sheets API, expanding search and map tool feature set and developing a new CMS all in React.js, ultimately expanding affordable listings by more than 10,000 properties.

## Leadership & Activities

### Joy Food Company / Product Management Intern

June 2020 – Present

- Spearhead redesign of online customer onboard experience. Coordinate with software developers and UI experts to utilize UX and design principles to optimize a new mobile-first [web experience](#).
- Recommend key design choices and product specifications, increasing user retention and sales online.

### Harvard Consulting on Business & the Environment / Associate

February 2020 – Present

- Lead 8-member student team to deliver data-driven recommendations directly to Fortune 500 clients.
- Engineer new member web portal, creating new database models and expanding productivity functionality in Django. Redesign [main website](#), boosting recruitment and case sourcing.