Riley Zhang

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Education

University of California, Berkeley — Berkeley, CA

B.A. in Computer Science, GPA: 4.0 — *Expected May 2028*

- **Coursework:** Data Structures, Programming Abstractions, Full-Stack Development, Foundations of Data Science, Linear Algebra, Calculus

Experience

UC Berkeley URAP, Our Way of Life Archive — Sep 2026 – Present

Full Stack Developer / Undergraduate Research Assistant — *Berkeley, CA*

- Engineered an interactive 3D spiral timeline visualizing 34 historical events with decade navigation and persistent multi-card interactions
- Built a trilingual digital archive using Next.js and Sanity CMS, supporting dynamic community collections and structured content management
- Developed automated content migration workflows for 33 participant stories and 34 timeline events, integrating historical records into a CMS-backed architecture

Society of Engineers, Scientists, and Entrepreneurs (SESE) — Sep 2026 – Present

Software Engineer, Tech Team — *Berkeley, CA*

- Develop full-stack features for SESECourse, a production platform connecting verified students to group chats
- Built group application and join-history workflows in Next.js, React, and TypeScript, shipped via PR code review
- Integrated server-side APIs with Supabase PostgreSQL to persist applications, retrieve status updates, and manage student records
- Implemented authentication and row-level access controls to protect student data and enforce role-based permissions

Berkeley Dining — Jan 2026 – May 2026

Food Service Worker — *Berkeley, CA*

- Served 300 students per shift, 5 shifts a week, on a fast-paced team while taking a full course load

Projects

CalBite | *React Native, Expo, Next.js, TypeScript, Python, Supabase, SQL* — Jun 2026 – Sep 2026

- Shipped a React Native mobile app and Next.js web app that alert students when their favorite foods appear on dining hall menus; live on iOS TestFlight
- Built a fault-tolerant Python data pipeline with 8 concurrent workers and retry logic that ingests 400–500 menu items per day across 8 dining halls, since no public API exists
- Designed a Postgres schema and 11 JWT-authenticated REST endpoints on Supabase for menus, favorite-food matching, settings, and push registration
- Cut per-load requests from N to 1 by batching per-date match calls, and built a daily 7:30 AM push digest with idempotent sends so users never get duplicate notifications

Particle Simulator (CS 61B) | *Java, OOP* — Sep 2026

- Built an interactive grid-based physics simulation in Java, modeling 8 particle types (sand, water, plant, fire, and more) with enums and per-cell neighbor maps on a 2D array
- Implemented per-tick update rules for gravity, liquid flow, randomized plant growth, fire spread, and particle lifespans, verified against a JUnit test suite

Technical Skills

Languages: Python, Java, JavaScript, TypeScript, SQL, HTML/CSS
Frameworks: React, Next.js, Node.js, React Native, Expo, Tailwind CSS
Backend & Tools: REST API Design, Supabase (Postgres, Auth), Sanity CMS, JWT Auth, Git/GitHub, Vercel
Concepts: Data Structures & Algorithms, Object-Oriented Design, Concurrency, Fault Tolerance, Web Scraping
Spoken Languages: English, Mandarin Chinese