

Jack Dao

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EDUCATION

University of California, Santa Cruz

Expected: June 2027

Bachelor of Science in Computer Science

Santa Cruz, CA

Relevant Coursework: Data Structures & Algorithms, Computer Systems & Design, Distributed Systems, Computer Architecture, Database Systems, Full Stack Web Development, Computer Networking, Machine Learning

TECHNICAL SKILLS

Languages: JavaScript/TypeScript, HTML/CSS, SQL, Python, C, C++, C#

Frameworks & Libraries: Jest, React, Angular, Node.js/Express, Firebase, NgRx, RxJS, Socket.IO, Elasticsearch

Databases & Platforms: PostgreSQL, Docker, Git, Linux, Heroku

EXPERIENCE

Software Engineer Intern

September 2025 – Present

Wilmers Lab, UC Santa Cruz

Santa Cruz, CA

- Reduced experiment setup friction and simplified data review by building a Python desktop app for schedule configuration, start/stop control, and CSV log export.
- Cut command failures by 30% by implementing UART/Bluetooth command-response in C with ACK/timeout handling and automatic retries.
- Prevented invalid runs and enabled 4+ researchers to run 10–15 weekly experiments by adding schedule import/export with validation and overlap checks.

Software Engineer Intern

June 2025 – September 2025

Knobull

Remote

- Served 1,000+ students with real-time mentor support by building a React single-page app and responsive UI on top of a Node/Express, Socket.IO, and PostgreSQL backend.
- Delivered 5M+ academic sources and 5,000+ searches by scaling an Elasticsearch search engine with ad and SEO filtering.
- Increased subscription reliability and ease of access by integrating Stripe checkout and Firebase Authentication for cross-device SSO.

Full Stack Web Developer

March 2025 – September 2025

Tech4Good Lab, UC Santa Cruz

Santa Cruz, CA

- Cut student onboarding time 40% for 30+ users by building an Angular onboarding app with TypeScript and NgRx.
- Improved students' ability to track commitments by developing a Firebase-backed task manager with Angular and NgRx for organizing tasks and deadlines.
- Improved reliability and security by implementing NgRx Store/Effects with optimistic updates, caching, error handling, and enforcing role-based access with Firebase Authentication and Firestore security rules.

PROJECTS

SlothLab: Game AI | *Unity (C#), Python, PCG, LLM APIs*

Apr 2025 – Jun 2025

- Reduced manual tutorial authoring effort by developing a Unity tutorial generator that uses LLM APIs to auto create step by step instructions and hints.
- Increased level variety and structure by implementing box split grammar and Python PCG (backtracking, heuristics, agent rules), raising generation diversity by 20%.

SluGarbage: Google DSC Club Solution Challenge | *Flutter, Firebase*

Jan 2024 – Mar 2024

- Onboarded 150+ users and cataloged 250+ items by building a cross platform waste sorting app with a Firebase backend and integrating Google Maps SDK to surface 60+ drop off sites, driving 500+ recycling site lookups and 60+ visits.
- Secured user accounts and supported intermittent connectivity with Firebase Authentication plus Firestore or Storage security rules and offline caching.