

Jeff Zhang

415-370-4062 | jeffzhang0049@gmail.com | [linkedin.com/in/jeffzhang0049](https://www.linkedin.com/in/jeffzhang0049) | github.com/Jeffuz | jeffzhang.net

EDUCATION

Georgia Institute of Technology

Master of Science in Computer Science

Expected Graduation: 2027

University of California, Santa Cruz

Bachelor of Science in Computer Engineering

2020 – 2024

EXPERIENCE

Software Engineer Intern

Vulcan Engineering Solutions

Jan 2025 – Present

Remote

- Led development of a real-time PDF annotation tool with 3+ concurrent users and integrated project workflows; optimized canvas writes to reduce DB load by 60%; coordinated design requirements across product teams
- Rewrote marketplace UI with role-based views and filters in Next.js/Tailwind; boosted SEO traffic by 13% resulting in 99+ Lighthouse score; collaborated with designers and PMs to refine UX through weekly feedback cycles
- Built and integrated CRUD APIs for 300+ entries in NestJS; synced frontend schema and validation with backend
- Replaced data fetching with TanStack Query; cut 40% of duplicate API calls and improved page load by ~150ms
- Integrated Clerk for OAuth/email auth and validated user metadata from questionnaire; cut login errors by 15%

Software Engineer Intern

UC Santa Cruz, Police Department

Jan 2024 – Jun 2024

Santa Cruz, CA

- Led a team of 5 in system design review with PMs and IT staff; refined features in Agile sprints to meet user needs
- Built 15+ RESTful endpoints with Express + PostgreSQL with pagination/filters; documented APIs via Swagger
- Developed a 3-module React/Material-UI system with audits, listings, and logs; digitized workflow for 500+ assets
- Integrated RFIDs with database to mark equipment state; reduced manual audit time by 66% through tag scans
- Achieved 100% test coverage across backend and UI components using Jest, Vitest, and React Testing Library

Group Tutor

Baskin Engineering at UCSC

Sep 2023 – Jun 2024

Santa Cruz, CA

- Tutored courses in Full Stack and Software Engineering with 80+ students; guided debugging of authentication flows, API logic, and database schemas, while reinforcing system design principles across weekly project reviews

PROJECTS

AERIS | *React.js, Tailwind CSS, Leaflet, YOLOv8, Groq, Llama, FastAPI, Supabase*

Apr 2025

- Automated a live system to stream drone footage and map alerts; ran CV-LLM pipeline to detect people/hazards, rank severity via LLaMA, and display geo-tagged alerts with snapshots; handled 10+ concurrent alerts
- Synced detections with interactive Leaflet map and FastAPI/Supabase backend; enabled <100ms update latency
- Awarded at LA Hacks (750+ participants) for innovation in AI disaster response and geospatial visualization

DreamArchive | *Next.js, Tailwind CSS, Shadcn, Deepseek, OpenAI, Supabase*

Feb 2025

- Engineered RAG pipeline using cosine similarity to retrieve relevant dreams & boost LLM reasoning for 50+ users
- Created REST APIs for dream storage, auth, and vector embedding; reduced retrieval latency to <250ms at scale
- Visualized dream emotions and recurring symbols using Chart.js; processed 250+ entries for pattern analysis

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, SQL, C, HTML, CSS

Frameworks/Technologies: React.js, React Native, Next.js, Node.js, Express.js, Flask, FastAPI, Supabase, PostgreSQL, Firebase, Pinecone, LangChain, Tailwind CSS, Material UI, Bootstrap

Developer Tools: Docker, Swagger UI, Postman, Figma, Git, Vitest, React Testing Library, Mock Service Worker, Jest, Supertest