BRIAN HUANG

San Francisco, CA 94122 | (415) 298 - 1343 | brian.yao.huang@gmail.com
LinkedIn|GitHub|Portfolio

EDUCATION

University of California, Davis **Davis, CA**

Bachelors of Science, Computer Science *September 2021 - December 2025*

TECHNICAL SKILLS

Languages: *JavaScript/TypeScript, Python, C, C++, SQL, Go, HTML/CSS*
Technologies: *React, Redux, Next.js, Node.js, Express, Git, PostgreSQL, Redis, Prisma, AWS, Docker, Kubernetes, CI/CD*
Practices: *Microservices, REST APIs, Event-Driven Architecture, JWT Auth, OWASP-aligned security, Unit Testing, TDD, Agile, Scrum, SDLC, MVC*

RELEVANT EXPERIENCE & PROJECTS

CivicConnect – Smart City Infrastructure Platform

Full-Stack Project *React | Next.js | Node.js | Kafka | PostgreSQL | Redis | Kubernetes | AWS*

- Designed and orchestrated **event-driven microservices** processing 1M+ IoT events/day, improving system reliability by 40% and reducing incident response time by 60%.
- Integrated **Redis caching and API load balancing**, accelerating response times by 70% under high throughput.
- **Built automated monitoring and alerting pipelines**, improving observability and enabling faster root-cause debugging during peak event volume.
- Engineered a **production-grade architecture blueprint** (microservices + event streaming + caching + monitoring) and documented scalability, reliability, and failure-handling strategies for portfolio use.

Banking Dashboard - Full Stack Application

Full-Stack Project *TypeScript | React | Node.js | Express | PostgreSQL | Prisma | Redux*

- Built **15+ REST API endpoints** using MVC with OWASP-aligned security, input validation, and rate limiting.
- Designed **atomic transactions with Prisma ORM**, preserving correctness across transfers, deposits, and withdrawals.
- Delivered **production-ready features** through Agile sprints, supported by unit testing and structured debugging to ensure operational integrity.

Lost & Found Web App – UC Davis

Full-Stack Project *React | Node.js | JWT | PostgreSQL | WebSockets*

- **Architected a UC Davis Lost & Found web app** featuring tag-based item search to support faster item discovery and retrieval.
- Implemented **secure JWT authentication** with password hashing, token validation, and security edge-case testing.
- Built **real-time WebSocket messaging** enabling direct student chat for streamlined lost item claims and coordination.
- Integrated **Google Maps API** to allow high-level meetup area selection for safer item exchanges without precise location exposure.

AI Real Estate Valuation Platform

Machine Learning Project *TensorFlow | Scikit-Learn | Optuna | Pandas | CI/CD*

- Built a **validated ML training pipeline**, improving model accuracy by 50% using automated preprocessing and hyperparameter optimization.
- Developed **anomaly and outlier detection** to maintain clean training inputs and reduce data noise.
- Deployed with **CI/CD and model interpretability tooling (SHAP/LIME)**, enabling continuous evaluation and drift monitoring post-deployment.