

Catherine Truong

catherinetrouong.github.io

Software Engineer

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EDUCATION

University of California, Riverside

Riverside, CA

B.S. in Computer Engineering

Sept. 2021 – June 2025

Coursework: Database Systems, Data Structures & Algorithms, Embedded Systems, Signals & Systems, Software Construction

EXPERIENCE

TechForce Robotics

Temecula, CA

Full-Stack Software Engineer (Frontend-Focus)

Nov. 2025 – Present

- **Migration:** Led migration of legacy HTML/CSS/JavaScript UI into a modern **React + Ionic + TypeScript + Tailwind** architecture, building reusable components and reducing UI code duplication by 70%
- **Integration:** Built a service layer with exponential backoff, rate-limit handling, and **Twilio** outbound-calling workflows, achieving 95%+ API reliability under unstable network conditions
- **Testing:** Developed a **full E2E testing suite** using Selenium WebDriver, Mocha, Chai, and Page Object Model structure, cutting test failures by 80% and reaching 95% test stability
- **Performance:** Implemented centralized API handling with TTL caching, retry logic, and request logging, improving perceived performance by 40% and reducing server load by 60%
- **UI/UX:** Designed and prototyped the full mobile and desktop interface in Figma, building component systems and interaction flows that served as the blueprint for the production React/Ionic implementation

First American Financial

Santa Ana, CA

Full-Stack Engineering Intern

Sept. 2024 – June 2025

- **Automation:** Enhanced and deployed an automated Jira update/release notes generator to reduce senior overhead by ~30%
- **DevOps:** Collaborated with senior engineers in planning sessions for Terraform, Kubernetes, and Docker adoption for MVP
- **Technical Documentation:** Updated 3 GitHub Pages platforms to include legacy documentation using MkDocs

First American Financial

Santa Ana, CA

Backend Software Engineering Intern

Jun. 2024 – Aug. 2024

- **AWS Optimization:** Curated AWS CloudWatch usage using Python and automated via Lambda & EventBridge, reducing costs by 78% and unused log groups by 88%, preventing future workload
- **HTTPS Compliance:** Automated HTTPS-conditional security compliance for 92% of AWS S3 buckets
- **Design Filtering:** Designed & optimized a filter to determine log group necessity in less than 3 seconds per log group
- **Data Export:** Exported 4 JSON files to S3 tracking 600+ updated log groups involving 4 years worth of data

UCR Information & Technology Solutions

Riverside, CA

Student Information Systems Intern

Apr. 2023 – Sept. 2024

- **Database Queries:** Tested SQL queries for students and academic advisors to ensure data accuracy and reliability
- **UAT & Documentation:** Performed user acceptance testing on the UC student portal, identified usability issues, and developed 20+ HTML documentation pages with actionable feedback for improved accessibility
- **ServiceNow Support:** Resolved Canvas-related help desk tickets through ServiceNow, providing technical assistance daily
- **LTI Coordination:** Gathered integration details from 20+ Canvas LTI vendors to support future deployment planning

PROJECTS

FoodTracker

Expo, React Native, Tailwind, TypeScript, Zustand

- Built a mobile meal-tracking app, delivering a UI with calendar navigation, timeline tracking, and data storage with AsyncStorage

Smart Glasses (Senior Capstone)

C++, Python, KNN

- Implemented KNN-based live color detection; developed and trained small language model (SLM) on various colors

Airline Management System

Java, PostgreSQL

- Implemented 15+ dynamic SQL queries for real-time operations while ensuring modular design for role-based management system

SKILLS

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

Frameworks/Libraries: Ionic, React, React Native, Selenium, Tailwind, Zustand

Cloud/DevOps/Tools: AWS, Azure, Docker, Figma, Firebase, **Git**, Miro, ServiceNow