STEVEN CHANG

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Education

San Jose State University — Master of Science, Software Engineering **San Jose, CA**
San Jose State University — Bachelor of Science, Software Engineering **San Jose, CA**

Experience

Software Engineer Intern **May 2024 – Aug 2024**
Dispatch *(Remote) Bloomington, MN*

- Integrated PostHog experimentation platform across production monolith, implementing automated instrumentation and feature flags to enable A/B testing and metrics collection for product experiments
- Re-engineered user onboarding flow using React frontend and Golang backend with PostgreSQL persistence, designing A/B experiments with automated conversion tracking that validated 35% improvement in signup completion rates
- Mentored junior intern on testing methodologies, reviewing test coverage and coaching on Jest/React Testing Library component tests and RSpec backend testing patterns

Software Engineer Intern **May 2022 – Aug 2022**
IBM *Mountain View, CA*

- Built contract validation test framework in Python/PyTest to verify third-party POS APIs against defined specifications across 15+ independently-updated software versions, identifying client-side contract violations impacting production reliability
- Designed and implemented React + TypeScript dashboard visualizing test results and failure patterns across version matrix, enabling engineers to differentiate between internal defects and external contract violations for faster root cause analysis
- Engineered automated data pipeline exporting test execution logs to S3 and PostgreSQL, integrated into GitHub Actions CI/CD to run validation multiple times daily and track reliability metrics over time

Software Engineer **Jul 2021 – May 2022**
Parkerr *San Francisco, CA*

- Built full-stack MVP as sole engineer, designing RESTful APIs with Node.js/Express, React frontend with component-based architecture, and MongoDB data models from scratch
- Deployed and managed production infrastructure on Google Cloud Platform, owning service reliability and cost optimization in a resource-constrained startup environment
- Served as technical lead, translating complex engineering trade-offs for non-technical stakeholders and making architectural decisions balancing performance, development velocity, and budget constraints

Projects

Terraform Provider for Polar — Open Source

- Developed and published a Terraform provider in Golang for the Polar billing platform, implementing CRUD operations with full idempotency and declarative state management using the HashiCorp plugin SDK
- Achieved 60+ organic downloads on the Terraform Registry with zero marketing, driven entirely by community discovery on the public registry

its-just-billing — Open Source

- Architecting a TypeScript payments SDK that abstracts Stripe API complexity into a declarative config layer, automating webhook processing, subscription lifecycle management, and plan migration logic
- Designed framework-agnostic adapter system for HTTP, database, and cache backends, reducing typical Stripe billing integration from hundreds of lines to a single config file

Fault-Tolerant Distributed Data Processing System

- Implemented distributed system in C++ processing real-time weather data across a 30-node cluster with RAFT consensus for leader election and custom TCP/serialization protocols without external dependencies
- Designed Byzantine fault tolerance through redundant task assignment and majority-vote validation, ensuring correct aggregate output despite random node failures and unreliable worker results

Skills

Languages: Python, Golang, C/C++, JavaScript/TypeScript
Frameworks & Libraries: React, Node.js, Express, Vitest, Jest, PyTest
Infrastructure & Tools: PostgreSQL, MongoDB, Redis, Docker, AWS (S3, EC2, EKS), Terraform, Git