TROY BALLINGER

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PROFESSIONAL EXPERIENCE

Full Stack Software Engineer   Apr 2024 – Present
Replicant
- Implemented self-service tooling for AI Agents, enabling version-controlled configurations, one-click deployments, A/B testing, and templating, and reducing go-live time for new customers by approx. 80%, from several months to just weeks.
- Drove the development of workflow-selecting functionality for conversational agentic AI, including disambiguation prompting, multi-model support, hallucination detection and self-correction, improving resolution rates of calls by over 10% and preventing customer churn.
- Led projects, including mentoring interns through the design of an M2M API for exporting large volumes of call data, enabling seamless customer integrations.
- Spearheaded key UX and performance enhancements, optimizing application responsiveness, and ensuring cross-team alignment through code reviews, robust automation and linting, and architectural discussions.
- Coordinated cross-functional incident response for AI agent issues, driving triage and resolution during production outages, ran postmortems and improved system health to reduce outage frequency.
- Delivered scalable, maintainable solutions across the full stack—resolving complex bugs, reducing technical debt, enhancing CI/CD pipelines, and shaping product direction through user feedback.

Full Stack Software Engineer   Aug 2021 – Nov 2023
Shippabo
- Built interactive maps to track hundreds of vessels in real time, enhanced with ML-powered delivery predictions for improved forecasting accuracy.
- Designed an atomic component system with Tailwind, revamped onboarding and authentication, and developed customizable dashboard widgets for a personalized UX that boosted user engagement by 126%.
- Developed GraphQL APIs and MongoDB schemas; integrated 3rd-party data via PubSub, message queues, Google Cloud Tasks, and webhooks.
- Improved CI reliability and test speed (Jest/Playwright), optimized MongoDB/Elasticsearch indexing, and boosted GraphQL responsiveness with optimistic UI updates.
- Deployed production builds, migrated data, conducted code reviews; collaborated cross-functionally to drive feature delivery and system stability.

Associate Software Engineer   Feb 2021 – Jul 2021
Gartner
- Built a dynamic PDF generation system for datasets, earning a 4.8/5 rating in customer satisfaction.
- Optimized 5+ production libraries and microservices, improving performance, readability, and maintainability.

Full Stack Software Engineer   May 2019 – Jun 2020
Ramagine
- Built and launched a cloud-based platform for security teams to safely upload, decompile, and analyze malicious files source code in-browser, with support for code modification and version control.
- Extended open-source NSA disassembly tools for sandboxed malware analysis; led core development, contributed to product strategy with founders, and pitched to cybersecurity firms and investors at DEFCON.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Java, SQL, Python, C, C++
Databases: MongoDB, PostgreSQL, ElasticSearch, Spanner, Redis, Drizzle, Mongoose, Prisma
Frameworks: React, Node.js, GraphQL, Fastify, Express, Spring, OAuth
Tools: Docker, Kubernetes, Terraform, Helm, Google Cloud Platform, AWS, Git

EDUCATION

Binghamton University   Vestal, NY
Bachelors of Science in Computer Science   *Sep 2016 – May 2020*