Alex Barber

she/her* | *Utah, US (Remote)* | *alex@dangerinteractive.com

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Senior Full-Stack Software Engineer with 12 years of experience architecting, building, and scaling high-integrity web applications, responsive user interfaces, and distributed backend services. Deep expertise across modern frontend engineering (TypeScript, JavaScript, React, Next.js, HTML/CSS, accessibility) and resilient backend architectures (Go, Kotlin, PHP, PostgreSQL, REST, gRPC, GraphQL) handling sensitive financial workflows and fraud prevention. Proven track record of modernizing legacy production codebases, driving end-to-end feature delivery, and maintaining high system reliability in remote engineering environments.

Skills

Frontend: TypeScript, JavaScript (ES6+), React, Next.js, HTML5, CSS3, Tailwind CSS, Webpack, Accessibility (WCAG 2.1)

Backend & Systems: Go, Rust, Kotlin, Java, PHP, C++, Elixir, Node.js, REST APIs, gRPC, Protocol Buffers, GraphQL

Data & Infrastructure: PostgreSQL, MySQL, Docker, Kubernetes, AWS (EC2), Varnish, HashiCorp Vault, GitLab CI/CD, Linux, Payload CMS, WordPress, Splunk, Bugsnag, PagerDuty/Squadcast

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Experience

Senior Software Engineer | *Nav*

November 2018 – July 2026* | *Remote
Promoted from Software Engineer in November 2022

- Engineered and maintained a centralized React and TypeScript design system powering credit card and lending marketplaces, building reusable UI primitives and stateful multi-step form flow controllers with WCAG 2.1 accessibility compliance.
- Resolved cross-application affiliate attribution loss across logged-out marketing sites, signup flows, and the logged-in React SPA by architecting a top-level React hook and cookie-persistence layer integrated directly into design system conversion components.
- Designed, documented, and implemented a Contact Verification microservice in Go and gRPC for KYB fraud prevention, securing 6-digit OTP codes at rest using HMAC keyed hashing with secrets isolated in HashiCorp Vault to mitigate brute-force and DoS vectors.

- Architected and implemented backend services and CMS integrations for a B2B Net-30 Trade Credit marketplace, designing custom Payload CMS schemas in TypeScript and authoring a Kotlin REST API client and gRPC pipeline to serve lender program data.
- Led the technical migration of legacy WordPress marketplace, stacker, and offer workflows into a modern full-stack architecture using Next.js, TypeScript, Node.js, and Payload CMS, serving as domain expert and mentoring engineers through the transition.
- Co-designed and implemented a high-throughput notification service in Go handling asynchronous queues for email, SMS, push, and in-app messaging across all product verticals, and authored a custom Go client library for Salesforce Marketing Cloud with rate-limiting and error recovery.
- Improved reliability of nightly partner batch uploads across distributed Go and gRPC lending services by implementing cross-service ID resolution fallbacks that automatically recovered missing partner identifiers and eliminated pervasive ingestion errors.
- Modernized legacy WordPress web platforms by building a React-based Gutenberg block design system, extending custom GraphQL schemas, migrating asset pipelines from Gulp to Webpack with GitLab CI/CD, and containerizing services on AWS EC2, Docker, Kubernetes, and Varnish.
- Maintained and resolved production incidents across Go, Kotlin, Elixir, GraphQL, and PHP services, balancing technical debt reduction with 24/7 platform availability while conducting 50+ technical interviews up to the Senior Staff level.

Independent Software & Game Developer | *Danger Interactive*

February 2018 – Present | Remote

- Architected TimberWolf, a modular game engine built from scratch in Rust around an Entity Component System (ECS) architecture, optimizing for memory safety, data-oriented design, and cache-friendly data structures.
- Authored Skeid, an open-source linear algebra library in Rust featuring exhaustive automated unit test coverage and zero external dependencies.
- Designed, built, and published a networking diagnostics app called HyperTrace for Android using Java and the native Android SDK.

Full-Stack Developer & Systems Administrator | *National Energy Foundation*

May 2014 – February 2018 | Murray, Utah

- Developed and maintained custom internal web applications and interactive reporting tools using vanilla JavaScript, PHP, MySQL, and accessible HTML/CSS.
- Built custom PHP software for surveying and asset management, implementing role-based access control (RBAC) and complex relational database queries.
- Engineered backend automation utilities to process high-volume email workflows and enforce strict regulatory data compliance.
- Administered on-premise and cloud Linux server infrastructure, automated continuous backup pipelines, and established emergency failover protocols to guarantee business continuity.