Ryan Gan

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Skills

TypeScript, React, React Native, Next.js, Redux Toolkit, React Query, CSS/SCSS, Node.js, Express, Fastify, Spring Boot, Java, PostgreSQL, AWS, CI/CD, Playwright, Jest

Experience

Walmart (Contracted via BeaconFire Solution Inc.)   Sunnyvale, CA
Software Engineer   May 2025 – Present

- **Architected an enterprise-grade internal operations platform** using **React 18**, **Fastify-based SSR**, and a modular sub-app (MPA/SPA hybrid) architecture. Enabled independent module code-splitting, secure SSO authentication, and automated workflows for rollback and failure recovery (DLQ).
- **Led a critical Node.js runtime migration (v12 → v22)** for the Map Generation Service, resolving **~400 commits of upstream divergence** and fixing security vulnerabilities. Completed the sync in a single sprint by manually reconciling 3 years of code drift without regressing existing features.
- **Implemented end-to-end observability** by instrumenting services with **Prometheus** metrics and structured logging via **OpenObserve**, enabling real-time monitoring of map generation latency, failure rates, and rollback events.
- **Developed a dynamic pin injection system**, enabling runtime rendering of seasonal inventory by handling **WebView-to-Native bridge requests** and processing backend location data on-the-fly. Extended the rendering pipeline to ensure full interactivity.
- **Optimized the data-processing pipeline** by migrating business logic from a Spring Boot service into Node.js, eliminating redundant network calls, reducing generation time by **50% (2-4 seconds per store)** and significantly lowering backend infrastructure load.
- **Established CI/CD maturity** by implementing **automated enterprise pipelines** with semantic versioning and developing a custom **Playwright-based validation framework** used as a mandatory quality gate for all production releases.
- **Modernized the UI architecture** by migrating components to the updated **corporate Design System**, ensuring strict brand compliance and visual consistency across all mobile and web viewports.

BeaconFire Solution Inc.   East Windsor, NJ
Full Stack Engineering Consultant   Sept 2024 – May 2025

- Developed a full-stack HR Onboarding & Management platform using **Vite, React, and Node.js**, implementing **Redux Toolkit** for predictable global state management across complex user flows.
- Architected a secure **JWT-based authentication system** with **Role-Based Access Control (RBAC)** and designed **30+ RESTful APIs** to streamline employee management and data retrieval.
- Implemented scalable document storage by integrating **Amazon S3** and Multer, optimizing file upload performance for sensitive employee records within a distributed **MongoDB** architecture.

Dynasty 11 Studios Inc.   Philadelphia, PA
Software Engineer   Sept 2022 – May 2024

- Designed and delivered frontend architecture for a HelpDesk platform, translating Figma prototypes into a production-ready **React** implementation.
- Developed comprehensive technician dashboards and analytics visualizations using **Recharts**, streamlining reporting workflows for support teams.
- Improved performance for the "Player 2" application by redesigning data models in **React Native** and refactoring **Spring Boot** APIs, achieving a **60% reduction in store load times**.
- Implemented cross-platform in-app purchase logic using **RevenueCat**, building backend support in **Spring Boot** to handle secure transaction validation.

Education

Drexel University   Philadelphia, PA
Bachelor of Science in Computer Science   2018 – 2023