BRYAN CHAN

Lead Software Engineer

📧 cky.bryan@gmail.com | 🌐 bryan.wtf | 💼 linkedin.com/in/cky-bryanchan | 🐙 github.com/ckybryan
📍 Toronto, Ontario, Canada

PROFESSIONAL SUMMARY

Full-stack software engineer with 8+ years of experience building enterprise logistics and warehouse management platforms. Currently leading technical initiatives at GoBolt, specializing in TypeScript/NestJS backend architecture, React frontends, and cloud-native deployments. Expert in designing scalable distributed systems, real-time applications, and warehouse operations software.

Core Expertise: TypeScript, NestJS, React, PostgreSQL, Kubernetes, Distributed Systems Architecture

TECHNICAL SKILLS

Frontend: React 18, TypeScript, Recoil, React Query, Vite, Ant Design, styled-components, Storybook, Playwright, Vitest

Backend: NestJS, Node.js, Express, TypeORM, PostgreSQL, Socket.io, Background Jobs, Distributed Locking

Cloud & DevOps: Kubernetes, Docker, ArgoCD, Helm, AWS (Elastic Beanstalk, Lambda), SOPS/KMS, GitOps, DataDog APM

Architecture: Domain-Driven Design, Microservices, Event-Driven Architecture, Message Queues, State Machines

Testing: Playwright, Vitest, Jest, FactoryBot, ESLint, Prettier, TypeScript Strict Mode

Tools: Git, LaunchDarkly, Sentry, Swagger/OpenAPI, DataDog APM

PROFESSIONAL EXPERIENCE

Lead Software Engineer

October 2021 - Present (4 years)

GoBolt (formerly Bolt Logistics) | Toronto, Ontario, Canada

Enterprise Warehouse Management System Architecture

- Architected and maintain enterprise warehouse management backend with **136+ modules** using NestJS, TypeORM, and PostgreSQL, processing thousands of daily warehouse operations across receiving, picking, packing, returns, and carrier transfer workflows
- Designed domain-driven architecture with standardized module patterns, custom decorators for authentication/permissions, and comprehensive Swagger API documentation
- Implemented **Generic Inflator Pattern** for background processing with distributed locking, supporting picksheet inflation, work orders, and asynchronous task execution with automatic retry and stale item cleanup
- Built **Signal Emitter Pattern** with two-table design for reliable HTTP request queuing to Core API with automatic retries and comprehensive event tracking
- Migrated from Redis-based distributed locking to PostgreSQL-based Generic Lock Service, eliminating Redis dependency and simplifying infrastructure

Frontend Development & Real-Time Systems

- Led development of React 18 warehouse management frontend with **130+ routes** across 35+ feature areas using TypeScript, Vite, Ant Design, and Recoil state management
- Architected scanner-first mobile-optimized interface for warehouse floor operations with auto-focus input handling and Command+K fuzzy search navigation
- Implemented WebSocket integration for real-time packing operations with live status updates
- Built multi-step picking/packing wizards, ASN processing flows, inventory management, and special projects interfaces
- Designed state management architecture using Recoil for global state, React Query for server-side caching, and URL params for shareable flow state

Cloud Infrastructure & DevOps

- Managed Kubernetes deployments across **8 environments** (prod, preprod, meta, air, escape, mini, tide, tri) using Helm charts and ArgoCD GitOps workflows
- Implemented secrets management with SOPS encryption and KMS integration for secure configuration across environments
- Built Docker containerization strategies with multi-stage builds, health check endpoints, and optimized caching
- Integrated DataDog APM with custom decorators for performance monitoring and error tracking across all services

Testing & Code Quality

- Established testing patterns: Unit tests with FactoryBot, integration tests with database fixtures, E2E tests with Playwright
- Implemented Storybook for component documentation and visual regression testing
- Maintained test coverage with Vitest and Jest across all services
- Enforced code quality standards with ESLint, Prettier, and TypeScript strict mode

Technologies: *TypeScript, NestJS, React 18, PostgreSQL, Socket.io, Kubernetes, Docker, ArgoCD, Helm, TypeORM, Recoil, React Query, Ant Design, Vite, Playwright, Vitest, DataDog, LaunchDarkly, SOPS*

Full Stack Engineer, Senior Software Developer, Team Lead

November 2020 - October 2021 (1 year)

Bolt Logistics | Toronto, Ontario, Canada

- Built a new app with NestJS (TypeScript backend framework) for warehouse inventory management system
- Deployed the app on Amazon Elastic Beanstalk with proper health checks and monitoring
- Designed database architecture and entity relationships for warehouse operations
- Built a new ReactJS frontend interface for warehouse system
- Built serverless AWS Lambda functions to query secondary database
- Handled concurrency issues with distributed locks
- Built an access management app allowing team leads to grant feature access to team members

Lead Frontend Developer

December 2018 - November 2021 (3 years)

Bolt Logistics | Toronto, Canada Area

- Introduced React hooks and formalized them into the codebase
- Introduced TypeScript into the codebase
- Introduced styled-components and replaced SASS from the codebase
- Introduced npm packages for both web (React) and mobile (React Native) components
- Introduced react-query into the codebase
- Built a React app for vehicle routing system with Google Maps API
- Introduced RecoilJS into the system and replaced Redux, reducing 60% of boilerplate code

Frontend Developer

January 2018 - December 2018 (1 year)

Bolt Logistics | Toronto, Ontario, Canada

- Introduced Redux into main site and solved the prop drilling problem
- Implemented progressive data loading on management tool to improve performance
- Introduced SASS into the codebase
- Built and deployed first React Native app for operations team
- Built business site from scratch with React

Frontend Developer (Intern)

November 2017 - December 2017 (2 months)

Bolt Logistics | Toronto, Ontario, Canada

- Updated site footer on main site
- Implemented Stripe Element with React on the site

PERSONAL PROJECTS

BryanStudio.dev - Personal Portfolio Website

2025

- Built modern portfolio website using React 19, TypeScript, Vite, and Tailwind CSS
- Implemented Framer Motion animations and glassmorphism design aesthetics
- Deployed on Railway with Docker containerization and Express server
- Features multilingual support and responsive mobile-first design

Technologies: *React 19, TypeScript, Vite, Tailwind CSS, Framer Motion, Docker, Railway*

AI Career Chat Agent

2025

- Developed AI-powered chat agent using OpenAI GPT-4 with custom function calling and structured outputs
- Implemented PDF profile parsing for context injection and personalized career guidance
- Built modern ChatGPT-style interface with real-time streaming responses
- Integrated push notifications via Pushover and deployed on Railway

Technologies: *TypeScript, OpenAI GPT-4, Express, React, PDF parsing, Railway*

PetCrew - iOS Pet Management App

2025

- Developed privacy-first iOS app for pet care management using SwiftUI
- Implemented local-first architecture with household sharing capabilities
- Designed with zero analytics and telemetry for maximum user privacy
- Published to App Store with full legal compliance (Privacy Policy, Terms, Support)

Technologies: *SwiftUI, iOS, Local-first architecture*

EDUCATION

Bachelor of Applied Science (BASc), Computer Engineering

University of Toronto

KEY ACHIEVEMENTS

- Built and architected enterprise warehouse management system with 136+ modules
- Led React frontend development with 130+ routes and real-time WebSocket features
- Managed Kubernetes/ArgoCD deployments across 8 environments
- Designed distributed systems patterns (Generic Inflator, Signal Emitter, Distributed Locking)
- Implemented comprehensive testing strategies and code quality standards
- 8+ years at GoBolt showing loyalty, growth, and technical leadership

LANGUAGES

English (Fluent) • Mandarin Chinese (Fluent) • Cantonese (Fluent)