MASON JOEY

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Skills

- **Web Development:** React, React Native (Expo), Capacitor, Electron, TypeScript, Tailwind CSS / CSS-in-JS, Redux, Zustand, Zod, Tanstack Query.
- **Backend:** Node.js, Next.js, NestJS (Encapsulated CRUD RESTful APIs), GraphQL, WebSocket, Middleware, Serverless (Vercel, Cloudflare, AWS Lambda/ECS Cold Start Optimization), Edge Distributed Microservices, API Gateway, Redis, Kafka, gRPC.
- **Web Frameworks & UI:** MedusaJS, Better Auth, GSAP Motion Animations, Acternity / shadcn/ui, AntD.
- **Build Tools & Performance:** Webpack, Vite, Turborepo, Monorepo, pnpm workspaces. performance optimization (code splitting, bundling optimization, asset optimization) tailored to business scenarios.
- **DevOps & Cloud:** Prisma, Drizzle ORM, PostgreSQL/D1, R2/S3. Docker Containerization, Kubernetes (K8s) Clusters, CDN Caching, Load Balancing. Sentry.io (Error Tracking), ELK Stack (Elasticsearch/Kibana). CI/CD / MLOps, Automated Testing (Jest), Canary Releases, A/B Testing. Familiar with Azure, AWS, Google Cloud, Vultr, and Alibaba Cloud.

Work Experience

HKBN (Hong Kong Broadband Network) | *Aug 2023 – Present*
Senior Software Engineer | AI   ITBS

- **AI Infrastructure:** Spearheaded the "Zero-to-One" infrastructure deployment of an **AI Portal**, empowering the BS-CS (Business Solutions & Corporate Services) ecosystem.
- **Toolchain Development:** Built a comprehensive AI-driven toolchain integrating APIs, Development workflows, and Vector Knowledge Bases.

Guangdong Lijin Logistics Co., Ltd. | *Feb 2021 – Jul 2023*
IT Supervisor / Lead | Engineering   Full Stack Architecture Team

- **ERP Architecture:** Led the Full Stack Architecture Team in refactoring and developing a multi-platform **ERP System** (Web, App, Desktop).
- **System Stability:** Managed high-concurrency data streams and cross-departmental integration. Successfully implemented containerized deployments with robust disaster recovery protocols.

Guangzhou Xinzhongying Cross-border Co., Ltd. | *Feb 2020 – Feb 2021*
Frontend Developer / DevOps

- **E-Commerce Platform:** Developed a cross-border e-commerce platform, implementing comprehensive user event tracking (telemetry), association analysis, and risk control data operations.
- **Optimization:** Focused on system optimization and successfully managed production launches.

Projects

AI Portal & Business Data Prompt Engineering
Next.js   RAG Pipeline   Data Lake   Kubeflow   PyTorch   Airflow   GSAP

- **AI Middle Platform Architecture:** Led the "Zero-to-One" development of a Microservices + K8s based AI Middle Platform. Implemented API Gateway aggregation and a full-link async/caching layer (Query/Vector/Prompt Cache) using **Kafka + Redis**.

- **RAG & Data Pipeline:** Orchestrated Data Lake cleaning, Embedding, and Multi-modal Indexing using **Kubeflow**. Utilized **pgvector + OpenSearch** for distributed storage and implemented a Hybrid Search strategy (HNSW + BM25 + RRF) with context Chunking optimization.
- **LLMOps:** Established an LLMOps platform integrated with **Langfuse** for full-link telemetry and observability, tracking Retrieval and Re-rank metrics. Introduced A/B testing, Canary releases, and iterative optimization of search strategies, Prompts, and `top_k` parameters. Integrated a 1M Menu Agent module with custom rules, scaling to 40+ business scenarios with production-grade accuracy and focus.
- **Smart Video Monitoring ("Safety Bell"):** Built a local vision model pipeline involving data labeling, keyframe extraction, **LoRA Fine-tuning**, and **Model Distillation**. Designed an automated training pipeline for vertical recognition tasks (fall detection, anomaly alerts, object detection/tracking). Deployed lightweight models for **Edge Computing** real-time inference, converting video to structured semantic data for security reports. Reduced false positive rates by 80% with a 98% detection rate.
- **Frontend Performance:** Optimized **Next.js** with Server/Client state management, PPR/SSR, Component-level Caching, and Compiler tuning to achieve sub-second FCP. Utilized `lazy`, `Suspense`, `useTransition`, and image API preloading. Implemented high-fidelity UI/animations via **GSAP** based on Figma designs and resolved complex Hydration errors.

ERP / Integrated Logistics SaaS

WebView PWA Service Worker Monorepo Redux Ant Design Apollo Cluster

- **System Architecture:** Built an Enterprise Logistics Management System using **React, Nest.js, Capacitor, and Electron**. Adopted a **Monorepo** and Microservices architecture to support Responsive Web, App, and Desktop platforms across provincial centers and driver terminals, resolving performance bottlenecks for dynamic scheduling of million-ton freight operations.
- **State Management & Performance:** Refactored **Redux** state management, introducing request caching, retries, and concurrency control. Implemented Real-time Sync, Optimistic UI, and **Offline Support (IndexedDB)** for weak network environments. Optimized large-list rendering (Virtual Scrolling) and form validation, reducing initial render time from **17s to 3s**.
- **Feature Implementation:** Developed visual components for vehicle tracking and drag-and-drop map navigation. Implemented Excel/CSV parsing and electronic waybills with watermarks. Built complex business logic including routing cost approval workflows, a 4-level address settlement system, and smart order consolidation/splitting for last-mile delivery and ride-hailing.
- **Backend & Microservices:** Designed a **BFF (Backend for Frontend)** layer for API aggregation. Implemented tiered Rate Limiting and Circuit Breaking using **Redis Lua**. Resolved GraphQL N+1 issues with **DataLoader**. Built a 5-layer permission model with JWT, supporting **1000+ concurrent connections** and real-time location streaming for 600+ vehicles with **<500ms latency**.
- **DevOps:** Constructed **Kafka** data pipelines and **Kubernetes** containerized deployment. Established **CI/CD** workflows with automated Jest/E2E testing. Implemented **Sentry** for monitoring and robust **WebSocket** heartbeat mechanisms (replacing polling) to support a 60+ Topic High Availability cluster.

Node.js Independent E-commerce & POS Integrated System

Express.js ORM react-i18next Stripe ChatWoot

- **O2O POS System:** Developed a full-stack, cross-platform **Online-to-Offline (O2O) POS system** using Node.js (Express), MVC architecture, and ORM. Integrated **react-scanner** for inventory/checkout and customized **Stripe** payment gateways/WebHooks. Implemented hardware-level driver interactions for barcode scanners and receipt printers to complete the transaction loop.
- **Analytics:** Built a user behavior tracking system with **>90% coverage** using `sendBeacon`. Optimized Core Web Vitals (LCP/CLS) and analyzed conversion funnels (PV/UV) to drive data-informed operational decisions.
- **Localization & Support:** Implemented on-demand multi-language loading via **i18next**. Customized a **ChatWoot**-based intelligent ticketing system for 24/7 automated customer support, increasing conversion rates by **28%**.

Education

South China University of Technology

Degree: Bachelor of Computer Science and Technology

Language : Cantonese,Mandarin,English