

Shawn Ohn

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SUMMARY OF QUALIFICATIONS

- Full-stack engineer with 10+ years shipping production systems across e-commerce, healthcare, and smart-city domains
- Currently sole lead engineer replatforming a live e-commerce marketplace end-to-end — 5 apps, full schema redesign, payments, and the production cutover
- Built an autonomous AI-agent harness that ships production database migrations and app code overnight, unattended
- Deep in TypeScript, React, Node.js, C#/.NET, Python, PostgreSQL, and AWS/self-hosted cloud infrastructure

PROFESSIONAL EXPERIENCE

Insaeng Sikdang — Lead Engineer

Cheonan, South Korea

Mar 2026 – Present | Fresh-food marketplace where local restaurants, farms, and producers sell and ship to customers nationwide

- Sole engineer leading a ground-up replatform of a live marketplace: from legacy Django/React to a TypeScript monorepo (TanStack Start, NestJS, Supabase Postgres/Auth/Storage), with production cutover landing Oct 2026
- Won the mandate for the replatform: hired for bug fixes and small migrations, audited the legacy platform (structure, schema, idempotency and transaction integrity, Redis usage), and convinced leadership to back a ground-up rebuild instead
- Redesigned the database schema across 10 business domains — 81 locked design decisions, all recorded in a single source-of-truth design doc
- Designed an autonomous AI-agent harness that ships production schema work overnight, unattended, including waves of four agents in parallel. Hardened over 12 documented revisions: worktree isolation, frozen evaluator gates (lint, types, build, db reset, tests), and checks that catch agents gaming the gates — deleted tests, mass mocking, silent skips
- Rebuilt the customer web app to v2 parity: Kakao OAuth (server-side PKCE), Sign in with Apple, a unified self+gift cart, and multi-recipient checkout. Also built an internal admin app with 9 operational views
- Maintained the live v2 platform in parallel: published mobile v2.0.0 to the App Store and Google Play, shipped a new platform-wide cancellation and refund process, and migrated all services to self-hosted Coolify with CI/CD, TLS, and automated database backups
- Integrated the payment gateway: idempotent ledger events, atomic order transition and cart consumption inside SECURITY DEFINER Postgres RPCs, verified end-to-end against the sandbox
- Automated settlement reconciliation against a payment provider with no official API: reverse-engineered its merchant-portal interface and measured the undocumented session timeout by probing it, then kept the session alive with a 5-minute heartbeat and a 4-tier fallback chain that degrades to manual CSV import in the same ledger schema
- Enforced authorization with Postgres row-level security across all apps (separate admin identity domain, attributed writes) and wrote a JWT-impersonation test suite that proves what each role can see — part of a 220-test database suite gating every release

Klick Health — Freelance Application Developer

Toronto, ON

Dec 2025 – Present

- Contracted for full-stack development on Software as a Medical Device (SaMD) programs in regulated client environments

Strata Research, Ltd. — Software Developer

Kitchener, ON

Aug 2021 – Apr 2025

Lonza — Cocoon cell-therapy protocol platform (biotech)

- Developed a protocol-authoring platform (ASP.NET Core, Blazor Hybrid/MAUI, EF Core) for programming the Lonza Cocoon, an automated CAR-T cell-therapy manufacturing device. Shipped the client to Windows, iOS, and Android and carried the platform through launch and a year of production releases
- Worked across a multi-provider EF Core architecture (SQLite, SQL Server, PostgreSQL) with two deployment modes: a fully-offline install where the desktop client hosts the entire server in-process, or a shared central server
- Built electronic record-keeping for a regulated lab context: an audit trail covering 16 event types, per-save JSON-diff change history, role-based access control (5 roles, 15 granular permissions), and protocol check-in/check-out locking
- Wrote the export layer that turns authored protocols into the Cocoon's XML format, plus Excel sheets for human review
- Grew the test suite to 187+ MSTest/bUnit methods, each provisioning its own isolated server and database in Azure Pipelines. Cleared the legacy defect backlog and held full regression coverage through release
- Turned evolving lab-workflow requirements into technical designs with QA, and owned the post-launch lifecycle: regression automation, release planning, developer docs

Turnstone — municipal curb management (Seattle DOT, City & County of Denver)

- Replaced 100+ Lambda functions and API Gateway endpoints with a handful of containerized FastAPI services on Fargate/ECS — fewer moving parts, cheaper to run, simpler to deploy
- Moved a fragmented Athena-over-S3 data layer onto a unified PostgreSQL schema on RDS, modeled on the Open Mobility Foundation's Curb Data Specification (CDS). Indexed reads replaced per-query scan billing, saving ~CAD \$6K a year
- Cut API response times 80% (seconds to under 500ms) on pipelines that process 10M+ paid-parking transactions a year, by reworking ETL workflows and adding predictive occupancy analytics
- Built the occupancy predictions, validated against ground-truth patrol surveys, that Seattle DOT used to review and update block-level parking rates in its published Paid Parking Annual Report
- Sped up the frontend 70% by moving from React to Next.js; built Mapbox/DeckGL/Recharts dashboards that map 1,000+ parking segments from OpenStreetMap and municipal open data
- Integrated 12+ external data sources (ParkMobile, PayByPhone, Passport, SDOT and Denver open data) through FastAPI endpoints and containerized processors; automated releases with GitHub Actions

HitGrab Game Labs — Game Developer

Toronto, ON

Oct 2020 – May 2021

- Built cross-platform features in Unity/C# for BlackJack 21, a casino card game localized into 30+ languages: multi-platform sign-in, in-app purchases, Firebase push notifications. Ported it to Android and released on Google Play, opening a new in-app purchase revenue channel

Endev Studio — Mid-Level Developer

Toronto, ON

Feb 2021 – Apr 2021

- Built core features of Heartcade, a gamified blind-dating app (Flutter, Firebase, Node.js), through a public iOS and Android launch that drew Toronto press coverage — including its time-limited anonymous chat with real-time messaging and push notifications

Austem — Software Developer

Cheonan, South Korea

May 2014 – Apr 2017

- Designed and developed a C#/.NET ERP system for a KOSDAQ-listed automotive parts manufacturer (~300 employees), spanning finance, procurement, production, and HR
- Automated the FTA certificate-of-origin paperwork — invoices, packing lists, origin declarations, process charts, BOM statements — generated straight from ERP data instead of assembled by hand for every shipment

EDUCATION

Master of Applied Computing — University of Windsor

Windsor, ON

2018 – 2019

Bachelor of Engineering, Computer Science — Dankook University

Yongin, Korea

2006 – 2011

SKILLS AND TECHNOLOGIES

- **Languages:** TypeScript, JavaScript, Python, C#, SQL
- **Frontend:** React, Next.js, TanStack Start, React Native (Expo), Tailwind CSS, Blazor/MAUI, Flutter
- **Backend:** Node.js, NestJS, FastAPI, ASP.NET Core, Supabase, PostgreSQL, SQL Server, Redis, GraphQL
- **Infra & Tools:** AWS (RDS, ECS/Fargate, Lambda, S3), Docker, Coolify, Traefik, GitHub Actions, EAS, Terraform, Firebase, Git