

Menghui Nie

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Career Summary — Menghui Nie, MSc, CSTE, CCE

AI & Full-Stack Architect • Blockchain Investigator • Principal Software Engineer • CTO Robotics Drone

I have 15 years of experience delivering high-impact technology across law enforcement, banking, healthcare, robotics, and cloud platforms. As CTO of a Toronto AI company and Principal Software Engineer at Symbotic (NASDAQ: SYM), I specialize in designing and building **LLM-powered applications, agentic AI systems, RAG pipelines, vector-database search, enterprise microservices**, and full-stack platforms that operate at scale.

I have architected Intelligence-Led Policing systems performance, engineered data and microservices for Symbotic's warehouse-automation robots, and delivered enterprise platforms for CIBC, BMO banks, and Mercedes-Benz Financial Services. I designed and built our AI powered medical triage and doctor routing application NQ Clinic, backed by a single agent Plan and Execute system with multi step reasoning, RAG medical retrieval, Reflexion based self correction, and tool calling for doctor search and ranking.

I am also the creator of **stAI**, a fully-engineered Ubuntu VM designed for full-stack developers, AI builders, and DevOps learners. stAI provides a clean, production-ready environment with pre-configured tools for building modern web apps, LLM systems, and cloud-native services—removing setup pain and accelerating learning and development. It is the same environment I use to teach students how to build real AI systems and full-stack applications.

I bring a rare combination of **hands-on coding mastery, enterprise architecture, and solution-architecture capability**—able to design database, middleware, cloud infrastructure, and front-end UI, leading engineering teams and delivering production systems end-to-end.

Technical Strengths

- **AI & LLM Engineering** — RAG pipelines, embeddings, vector databases, TensorFlow, PyTorch, NLP automation.
- **Blockchain & Crypto Investigation** — wallet tracing, fund-flow analysis, smart-contract auditing, Web3 integrations, known by the investigator identity Cyber Dragon (CD).
- **Full-Stack Development** — Next.js, React, React Native, Angular, Tailwind, HeroUI, Storybook, Node.js, Express.js, FastAPI, Laravel, REST APIs.
- **Enterprise Architecture** — SQL Server, Oracle, MongoDB, Redis, Kafka, Spark, Kubernetes, Docker, AWS/Azure.
- **Robotics & Real-Time Systems** — microservices, sensor integration, navigation logic, warehouse robotics.
- **Drone Systems** — firefighting drones, marine-drone rescue, and airport& city, large event counter-drone networks.
- **Big Data & BI** — ETL pipelines, data marts, dashboards, high-volume analytics, Air Miles Data Warehouse experience.

What I Deliver for Clients

- **AI Applications** — LLM platforms, RAG systems, intelligent search engines, automation tools.
- **Robotics & Drone System** — firefighting drones, marine rescue, large drone show and anti-drone safety networks.
- **Full-Stack Web & Mobile Apps** — complete platforms from database to cloud backend to modern UI.
- **Blockchain & Crypto Solutions** — tracing tools, smart contracts, Web3 apps, crypto-forensics systems.
- **Big Data & BI Systems** — data warehouses, ETL pipelines, analytics dashboards, enterprise reporting.
- **Architecture & Team Leadership** — best practice, code standards, DevOps pipelines, mentoring and leading teams.
- **Education & Training** — stAI-based full-stack and AI training for developers, students, and organizations.

Future Focus

I am advancing next-generation **AI platforms, robotics, drone-based systems, counter-drone safety networks, blockchain-forensics technology,** and **stAI-powered developer education.** I partner with organizations that require deep technical expertise, rapid execution, and enterprise-grade reliability.