Ty Nasello

tynasello.com | tnasello@uwaterloo.ca | in/ty-nasello | github.com/tynasello

SKILLS

Languages: TypeScript, Python, Rust, Golang, SQL, Java, C++.
Technologies: Docker, AWS, React.js, Kubernetes, NestJS, PostgreSQL, NoSQL, Kafka, GraphQL, Git.

WORK EXPERIENCE

Software Engineer Intern - MedMe Health - Toronto, ON. 5/23 - 8/23.

- Implemented **real-time data streaming** capabilities for enterprise clients in a serverless monorepo leveraging **TypeScript** and **AWS**. Captured and normalized up to 4000 events/minute from production databases, achieving seamless downstream transmission using **Python** and **Docker** and enabling data-driven operations for clients.
- Revolutionized the data streaming system by architecting and implementing a dynamic **webhook API** using **TypeScript** and **AWS** (Cognito, Lambda, API Gateway), enabling clients to effortlessly self-register endpoints to receive real-time data.
- Optimized resource utilization of production databases by designing and creating a **database-proxy infrastructure** leveraging connection pooling and seamlessly integrating system lambdas using **CDK, AWS,** and **TypeScript**.
- Enhanced integration testing capabilities of serverless infrastructure by constructing a testing utilities package.

Software Engineer Intern - Orbiseed Technology Inc - Toronto, ON. 9/22 - 10/22 (company ceased operations).

- Developed REST API endpoints and client-facing front-end features enabling insurance carriers to more effectively manage documents. Utilized **TypeScript, Express.js, React.js, MongoDB**, and **Jest**, employed agile practices, and leveraged technologies like Mongoose, S3, and SQS to carry out feature specifications.

Software Development Intern - MedMe Health - Toronto, ON. 1/22 - 4/22.

- Developed front-end pharmacist and patient-facing features for web applications empowering over **2200 Canadian pharmacies** to provide clinical services at scale. Implemented numerous shipped features and was an initial driver in unit testing new front-end components (**React.js, TypeScript, GraphQL, Redux**).
- Designed a time-saving tool that streamlined the process of mapping PDFs with persisted patient information, increasing team efficiency and outsourcing work to non-developers.

EDUCATION

University of Waterloo, 2021-2026

Bachelor of Computer Science (BCS) - CGPA: 91.3 - Dean's Honors List Winter 2023.

PROJECTS

Event-Driven Microservices - 4/23 - GitHub Link

- Created a **microservice**-based ordering system, leveraging **Kafka** for **event-driven** communication between **Kubernetes**-managed services.
- Created a Rust-based CLI tool and implemented critical functionalities including secured APIs, and event emission and handling using technologies like **Go, Rust, Java, Python,** and **SQL.**

Clean Architecture Template - 12/22 - GitHub Link

- Developed a **highly modular** and **loosely coupled** monolithic application adhering to the **Clean Architecture** design philosophy, serving as a robust starting template for developers. The constructed application features a secure API with JWT authentication, WebSockets, and comprehensive testing. (**TypeScript, NestJS, PostgreSQL, Docker**)