TY NASELLO

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EXPERIENCE

MedMe Health Toronto, ON
Software Engineer Intern May 2023 - Aug 2023

- **Optimized resource utilization** of production databases by constructing a system to proxy and pool connections from serverless infrastructure, deployed on AWS ECS using the TypeScript CDK and Docker.
- Core member unlocking **new revenue source** by developing microservices in TypeScript and Python to stream millions of events per day from Postgres databases to customers using AWS (CloudFormation, Lambda, Kinesis).
- Enabled customers to **self-serve integrations** by implementing the company's first webhook API system using TypeScript and AWS (API Gateway, Lambda, Cognito).
- Increased developer productivity by writing a library providing reliable and customizable data for serverless testing.

Orbiseed Technology Toronto, ON (Hybrid)
Software Engineer Intern Sep 2022 – Oct 2022

- Engineered REST API endpoints with TypeScript, Express.js, and the AWS SDK, enabling insurance carriers to store, manage, and download AI-processed reports stored in MongoDB and AWS S3.
- Expanded front-end dashboards in React, allowing users to upload and interact with a variety of file types.
- Implemented various back-end application logic, leveraging dependency injection and TDD with Jest throughout.

MedMe Health Toronto, ON (Remote)
Software Development Intern Jan 2022 – Apr 2022

- Built pharmacist dashboard features using TypeScript, GraphQL, and Redux, for web applications empowering nearly **3000 Canadian pharmacies** to provide clinical services at scale.
- Developed form intakes in React **allowing Canadians to seamlessly book consultations and vaccinations**.
- Designed a tool increasing the efficiency of mapping patient PDFs and outsourcing work to non-developers.
- Acted as an initial driver and planner of unit testing new frontend logic, increasing test coverage of applications.

SKILLS

- **Languages:** TypeScript, Python, C++, Rust, Golang, Java, SQL, HTML/CSS
- **Software:** Docker, AWS, Kubernetes, Postgres, NoSQL, React, Node.js, Spring Boot, Kafka, REST, GraphQL, Linux, Bash, Git

PROJECTS

Event-Driven Microservices Apr 2023
Project Link: github.com/tynasello/event-driven-microservices

- Designed a warehousing system, leveraging Kafka for communication between Kubernetes-managed microservices.
- Implemented an **event-driven architecture** and built secured APIs in Golang, Rust, Java, Python, and SQL.
- Created a CLI in Rust to view events in the system and act as as interface for simulating real-world actions.

Clean Architecture Template Dec 2022
Project Link: github.com/Tynasello/nest-clean-architecture

- Built an application template for others to use the **clean architecture** design philosophy in TypeScript and NestJS.
- The application focuses on being **robust, highly modular, and loosely coupled**, and features a REST API and Postgres database run through docker with JWT authentication, WebSocket services, and comprehensive testing.

Facial Expression Classifier Apr 2022
Project Link: github.com/Tynasello/facial-expression-classification

- Constructed a convolutional neural network (CNN) using Python and PyTorch that classifies images of human faces into seven emotion-based categories.
- Employed transfer learning, hyperparameter tuning, and data augmentation to enhance model performance.
- Conducted data manipulation/visualization using NumPy, Pandas, and Matplotlib, reaching a test accuracy of 66%.

EDUCATION

University of Waterloo, Waterloo, Canada Sep 2021 — Apr 2026 (Expected)
Bachelor of Computer Science (BCS), Honours Co-op (GPA 91.3%) Dean's Honours List (Winter 2023)
Relevant Coursework: Data Structures and Algorithms, Objected-Oriented Programming, Computer Design