

# Ty Nasello

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

## Work Experience

### Software Engineer Intern @ Orbiseed Technology Inc.

Toronto, ON (Remote) | Sep 2022 - Oct 2022 (ceased operations) | Employer Evaluation: Outstanding

- Implemented application features and business use cases enabling insurance carriers to effectively manage documents.
- Developed REST API endpoints in an Onion Architecture, made client-facing web UI changes and wrote unit and end-to-end tests. (TypeScript, Express.js, React.js, MongoDB, Jest/Chai).
- Leveraged numerous libraries such as InversifyJS (an inversion of control container) and Mongoose, as well as tools like AWS (S3 and SQS). Learned how a CI/CD pipeline is constructed, and how services like AWS (ECS, ECR, CodePipeline) can be utilized.

### Software Development Intern @ MedMe Health

Toronto, ON (Remote) | Jan 2022 - April 2022 | Employer Evaluation: Outstanding

- Developed pharmacist and patient workflows for web applications enabling 2300 pharmacies to provide clinical services at scale.
- Was responsible for implementing numerous shipped features and was an initial driver in unit testing new front-end components. (React.js, TypeScript, GraphQL, PostgreSQL, Java, Spring Boot, Redux, Jest, Agile).
- Increased team efficiency and outsourced work to non-developers by independently designing a tool that expedited the process of mapping PDFs with patient information stored in PostgreSQL databases.

## Projects

### Clean Architecture Template | December 2022 | GitHub Link

- Created a template for a monolithic application that follows the Clean Architecture design philosophy. The repository offers a starting place for developers wanting to build their next project. The template adheres to SOLID design principles throughout and prioritizes modularity and loose coupling.
- The application consists of an API and databases which are managed through Docker. REST controllers are guarded via JSON Web Tokens. Web sockets are configured to emit events to authenticated connections. End-to-end, integration, and unit tests exist throughout the application. (TypeScript, NestJS, PostgreSQL).

### Facial Expression Classifier | July 2022 | GitHub Link

- Constructed a convolutional neural network (CNN) that classifies images of human faces based on their emotions.
- Employed transfer learning and performed both hyperparameter tuning and data augmentation to improve model performance, reaching a test accuracy of 65.5% (would've ranked top 5 in Kaggle competition). (Python, PyTorch, NumPy, Pandas, Matplotlib).

### Food Delivery App | April 2022 | GitHub Link

- Designed and built a food delivery web application clone. Users can log in and add and manage food items in their shopping carts.
- Constructed a GraphQL API to support CRUD functionality and user authentication, designed a multi-page UI from scratch, wrote unit and end-to-end tests, and hosted the application on Heroku. (NestJS, TypeScript, React.js, GraphQL, PostgreSQL, Docker).

Older Projects: Arduino Robot Car, Color Sorter Robot, CV Builder, Flappy Bird (Recreation).

## Education

University of Waterloo | Candidate for BAsC Mechatronics Engineering | September 2021 - April 2026

CGPA: 3.97. Relevant Coursework: Algorithms and Data Structures, Linear Algebra, Digital Computation, Calculus II.

## Skills

**Languages:** TypeScript/JavaScript, Python, C++, Java, SQL, HTML/CSS

**Technologies:** Node.js, React.js, NestJS, Docker, GraphQL, PyTorch, PostgreSQL, MongoDB, Git