

# Michael (He Yang) Li

<https://github.com/kayoMichael> • +1 (905) 616 8745 • <https://michael-li.vercel.app>

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## University of Waterloo

Bachelor of Mathematics, Computing Minor (Co-op)

Waterloo, ON

September 2021 – April 2026

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## TECHNICAL SKILLS

- Python
- TypeScript/JavaScript
- React/NextJS
- ExpressJS/NodeJS
- Flask/FastAPI
- MySQL/SQLite
- MongoDB
- Prisma/Mongoose
- AWS

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## Internship Experience

### Musashi AI

May 2025 – Present

*Full Stack Developer Intern*

- Developing software for managing and monitoring the **Cendiant Quality Insights**, an AI inspection system for visual inspection of Vehicle components like the camshaft.
- Developing workflows to Fetch images from **AWS S3** and invoked AI models for visual inspections and analysis.
- Developing a full stack analytics page using **VueJS**, **Typescript**, **Python** and **FastAPI**.
- Analyzed AI results to accurately output predictions, confidence levels, acceptance thresholds, and relevant metrics.

### Enju Inc.

May 2024 – Aug 2024

*Software Developer Intern*

- Developed a Full Stack SaaS Application, leveraging **NextJS**, **React**, **TypeScript**, and **Firebase**.
- Implemented a Layers Architecture Approach for separation of concerns and to ensure code maintainability and scalability.
- Adhered to an agile methodology for the software development process due to the constraint of budget, time and personnel.
- Utilized **Firebase Authentication** and **Firestore** to manage user authentication and data storage, ensuring data security and integrity.

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## Projects

### Market Place for AI Generated Image

- Developed a Full Stack Application to allow users to Share their own interesting Generative AI Images using **React**, **MongoDB**, **ExpressJS**, and **TypeScript**.
- Utilized **Docker** and **Github Actions** to create multi-staged Deployment for efficient manual testing in production environments.
- Setup Session based Authentication using **Redis** and **ExpressJS**. and protected private API endpoints.
- Integrated **OpenAI API** with strict rate limits to allow users to generate images on the platform.

### Premier League Library

- Created a **Python** package to analyze transfers, team rankings, top player stats, and match statistics for the top 5 European leagues.
- Scraped over **19,000 advanced soccer statistics** and automated the initialization of a **SQLite** database for **machine learning** training upon package installation.
- Developed a **Flask API** and an **AWS Lambda/API Gateway application** to expose the library as an API.

### Neural Network for Soccer Match Classification

- Developed a neural network to classify outcomes of professional soccer matches using **PyTorch** and **Scikit-Learn**, leveraging advanced match parameters from the **Premier League Library**.
- Implemented strategies like **L1/L2 regularization**, **batch normalization**, and **synthetic minority oversampling** to reduce overfitting and enhance model accuracy.
- Experimented with multiple activation functions and network structure to find the highest accuracy.