

Jolin Ma

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EDUCATION

University of Waterloo – *Master of Engineering, Electrical & Computer Engineering*
Jan. 2025 – Dec. 2025 (expected)

Southern University of Science and Technology – *Bachelor of Engineering, Electronic & Electrical Engineering*
Sep. 2020 – Jun. 2024

SKILLS

Programming Languages: Python, Java, TypeScript/JavaScript, Rust, Solidity

Frameworks & Tools: Node.js, NestJS, React, Docker, Git, Linux, OpenCV, PostgreSQL, AWS

Core Strengths: backend system design, fast learner, proactive problem-solver

Languages: Mandarin (Native), English (Bilingual)

EXPERIENCE

Software Developer Intern | Bifrost (bifrost.io) May 2024 – Present · Remote

- Developed Substrate-based runtime modules and smart contracts using Rust and Solidity.
- Built and maintained APIs and scripts to process and monitor on-chain blockchain data in real time.
- Wrote comprehensive unit and integration tests for smart contracts to ensure correctness and security.
- Developed backend automation scripts to streamline deployment, monitoring, and maintenance of blockchain services.

Full Stack Software Developer Intern | Pebbles AI (pebblesai.xyz) Jun 2025 – Present · Hybrid

- Designed and deployed a flexible Retrieval-Augmented Generation (RAG) system, supporting both local LLMs and multiple external APIs (e.g., OpenAI, Deepseek) for enterprise clients.
- Optimized data flow and inference pipelines to efficiently run large-scale LLMs, implementing techniques that enabled a 40B-parameter model to run on a single RTX 4090 GPU.
- Developed frontend dashboards with React and TypeScript to visualize AI outputs and workflows, providing an interactive chatbot-like interface.
- Customized system features and integrations according to specific client requirements, enabling tailored AI-powered solutions.

PROJECTS

Natural Language Command Person-Following Robot | Sep 2023 – May 2024

- Built a robot that executes natural language instructions using LLM APIs, improving human-following reliability in dynamic environments.

Mercat – Autonomous Cat-Feeding Robot | Jun 2023

- Developed a CNN-based vision system to classify cat breed and age, automating food dispensing based on model predictions.