

Marco Chen

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EDUCATION

University of Waterloo Bachelor of Computer Science, Co-op	Waterloo, ON Sep. 2023 – Aug. 2028
<ul style="list-style-type: none">• CGPA: 3.7/4.0• Coursework: Object-Oriented Programming, Data Structures and Algorithms, Computer Organization	

EXPERIENCE

Open Source Developer/Reviewer Shipd (by Datacurve YC W24) TypeScript, Python, LLM Training, OSS	Dec. 2025 – Current Remote, San Francisco, California
<ul style="list-style-type: none">• Safeguarded the AI training pipeline against data contamination by auditing peer code submissions to ensure high-quality data ingestion• Engineered Ground Truth datasets by reproducing bugs in high-traffic OSS repositories, authoring distinguishing test suites to capture edge cases, and implementing production-grade patches	
Software Engineer Intern Geotab C#, TypeScript, React, .NET, Jest, xUnit	Sep. 2025 – Dec. 2025 Kitchener, ON, Canada
<ul style="list-style-type: none">• Built an automated end-to-end testing framework for regulatory compliance certifications, which reduced test execution time by 98% (from 2 weeks to 4 hours)• Designed a declarative, data-driven testing pattern using xUnit Theory that decreased redundant code by 75%• Optimized Redux integration by refactoring blind event listeners to granular data store observers and enforcing cache immutability via cloning, cutting redundant re-renders and unintentional side effects by 40%	
Software Engineer Intern Octopodi Technologies Typescript, React, Tailwind CSS, Next.js, Jest	Jan. 2025 – April 2025 Waterloo, ON, Canada
<ul style="list-style-type: none">• Built the UI for the product from scratch using TypeScript and React, delivering a reusable component library• Practiced Test-Driven Development and reduced review time and post-release bug count by 50% and 40%• Developed and automated 200+ unit tests using Jest and achieved over 90% code coverage in all components	
Software QA Intern Shanghai Renhe Network Technology Co.,Ltd Unity, MS Office	May 2024 – July 2024 Pudong, Shanghai, China
<ul style="list-style-type: none">• Executed and analyzed test cases, delivering actionable insights that informed product improvements, contributing to a 30% decrease in bug resolution time, eliminating 15 hours of work	

PROJECTS

SnapNote AI FastAPI, Next.js, PostgreSQL, pgvector, LangGraph, Google Cloud Vision, RAG	
<ul style="list-style-type: none">• Built FastAPI/Next.js platform using OCR with Google Cloud Vision API to digitize any lecture notes• Architected multi-agent workflow to automate document structuring and complex LaTeX formula extraction• Engineered a RAG pipeline utilizing pgvector and multilingual MiniLM embeddings to facilitate high-performance semantic search across hundreds of digitized documents stored in a PostgreSQL database	
Supervised Chess Neural Network PyTorch, python-chess, Hugging Face Datasets, NumPy, Matplotlib	May 2024 – July 2024 Pudong, Shanghai, China
<ul style="list-style-type: none">• Architected an AlphaZero-style ResNet in PyTorch to automate move selection and position evaluation• Implemented legal move masking and multi-worker data loading to optimize GPU-accelerated model training• Integrated Batchnorm, Dropout, and Early Stopping to minimize overfitting and accelerate model convergence	

TECHNICAL SKILLS

Languages: Python, TypeScript/JavaScript, C#, C++, HTML, CSS, SQL
Frameworks: FastAPI, LangGraph, Next.js, React, Tailwind CSS, shadcn/ui, Jest, Django, Node.js, Flask
Tools & Platforms: Git, Linux, Docker, Kubernetes, Postman, ngrok
Databases/Cloud: AWS, S3, Lambdas, ChromaDB, PostgreSQL, pgvector, MySQL, MongoDB, Redis, Kafka
Libraries: PyTorch, TensorFlow, Keras, OpenCV, NumPy, Matplotlib, pandas, PyAudio