Christopher Yihan Jiang

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EDUCATION

University of Waterloo	Waterloo, ON, Canada
Bachelor of Computer Science (BCS) Honors Co-op	Sep 2022 - Apr 2027
University of Waterloo President's Scholarship of Distinction	*GPA: 3.7/4.0*

EXPERIENCE

CRESTA — Toronto, ON, Canada
Software Engineer — Jan 2025 - Apr 2025

- **Developed a modular RAG system**, by combining semantic vector search with BM25 lexical search for precision, and effectively integrating 3+ LLMs and achieving a 20% reduction in query response time.
- **Curated and dynamically loaded knowledge bases** from live data streams, processing 50,000+ data points daily to ensure real-time adaptability and system scalability.
- **Built and managed a feedback queue** to refine the RAG pipeline, improving knowledge curation accuracy by 15% and increasing model performance metrics by 10%.

Defang Software Labs — Vancouver, BC, Canada
Software Engineer — May 2024 - Dec 2024

- **Developed and deployed a Retrieval-Augmented Generation (RAG) chatbot** using Python, Flask, and React, integrated with AWS Elasticache for Redis and OpenAI's GPT-4, significantly improving user interaction and response accuracy, leading to a 25% increase in documentation site retention rates.
- **Automated CI/CD pipelines** using Docker and AWS, improving deployment efficiency and scalability.
- **Engineered and showcased full-stack web applications** using Angular, React, SvelteKit, and Feathers.js to augment AI generation for CLI, boosting engagement on the documentation platform.

Bulk Barn — Aurora, ON, Canada
System Analyst — Sep 2023 - Dec 2023

- **Automated software deployment and bloatware removal** across 100+ systems in over 275 locations in Canada using Bash scripts, Active Directory, and PDQ Deploy, significantly streamlining processes.

CERTIFICATION

The University of Texas at Austin	Austin, TX, USA
Professional Certificate in Full Stack Software Development	Sep 2023 - Jun 2024

- Building Scalable Cloud Applications in MERN stack (MongoDB, Express.JS, ReactJs, Node.JS).

AWS Certified Cloud Practitioner (CLF-C02) — Jul 2024

- Gained knowledge of AWS cloud services, including serverless computing, VPC, SQS, SNS and CloudWatch.

SKILLS

Programming Languages:	Java, C/C++, Python, Go, SQL, Bash, Typescript, Javascript
Backend:	Spring Boot, JPA, MongoDB, PostgreSQL, NodeJS, Flask, Sveltekit, Langchain
Frontend:	React, Angular, Svelte, NextJS, Vite
Tools and Frameworks:	Git, Docker, Kubernetes, Wireshark, Pulumi, Scikit, JUnit

PROJECTS

RAG Chatbot *Python*

- **Implemented a RAG chatbot** integrating a knowledge base with GPT-4 and AWS Elasticache.
- **Improved response accuracy** by combining retrieval and generation techniques.

Password Manager *Python*

- **Developed a secure password manager** with encryption, decryption, and CLI features.
- **Implemented multi-platform support**, ensuring compatibility with Windows, macOS, and Linux.

Custom Port Scanner *Go*

- **Created a custom port scanner** with TCP, SYN, UDP scans.
- **Added support for OS detection, ARP tracking, and customizable scanning profiles.**

EXTRACURRICULAR ACTIVITIES

Hack the North 2024 - Mentor	2024

- Guided teams in web development, cybersecurity, and AI projects, offering technical support and troubleshooting.

AWARDS & HONORS

- UofTHacks 12 Best Security Hack Sponsored by 1Password — 2025
- American Invitational Mathematics Examination (AIME) Qualifier — 2022