

Alan Zhong

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github.com/hoshino0113

<https://alanzhong0601.web.app>

Education

Master of Computer Science: **Lakehead University** (GPA 3.9/4.0)

Sept 2025 – Present

Bachelor of Computer Science: **University of Waterloo** (Honors)

Graduated in May 2025

Skills

Languages: Java, Python, JavaScript, SQL

Tools/Frameworks: PyTorch, RAG, Agentic AI, Ollama, AWS, Firebase, Power Automate, Hadoop, Spark, Git

Work Experience

City of Ganzhou Big Data Center

Ganzhou, China

Software Research and Development Intern: GenAI

Jun – Aug 2025

- Built an **agentic AI contract reviewer** using **locally deployed LLM + Dify**, enabling contract review, clause injection, and contract drafting, reducing manual turnaround from **~1 day to ~10 minutes**
- Designed a **RAG pipeline** for grounded contract Q&A and clause recall, improving **retrieval accuracy by ~60%**
- Developed a **Markdown-to-DOCX automation tool** in **Python** to generate standardized contract
- Integrated backend services and workflow orchestration using **Python + Java** to achieve end-to-end automation
- Containerized and deployed components with **Docker**, gaining exposure to **Spring Boot, Kubernetes, and Jenkins** in an enterprise development workflow

Manulife

Toronto, Ontario

Global Technology Service Management Co-op

Sept – Dec 2024, Sept – Dec 2023

- Automated **Change Tracking + CAB reporting** using **Python, Power Automate, and Excel VBA/Macros**, reducing manual reporting effort by **90%+**
- Contributed to an internal **GTSM chatbot** built with **Azure Bot Service**, enabled self-service workflows
- Developed **PowerShell automation** for disaster recovery data audits and daily summaries, cutting manual inspection time from **~3 days to ~30 minutes**
- Supported deployment of a **ServiceNow Risk Intelligence** module to enable automated **change-risk scoring**

DOZR Technology

Kitchener, Ontario

Product Software Engineer Co-op

Jan – May 2023

- Improved debugging efficiency by developing **MongoDB** search queries for the database
- Performed end-to-end **QA testing** for a new checkout flow using TestRail, ensuring reliable online transactions

ShanDong AIDrive

Remote, ShanDong, China

Software Engineer Intern (Remote in Waterloo)

Aug – Dec 2022

- Created web-scraping tools (**Python, BeautifulSoup**) to collect > 500k data points for AI model training
- Developed a data processing pipeline to **clean and store** training data for downstream modeling and analytics

Projects

GPT-MT: Evaluating Generative AI for Machine Translation (<https://alanzhong0601.web.app/projectPaper/MT.pdf>)

- Deployed a **DeepSeek-R1-14b translation pipeline**, benchmarked LLM-based MT across **6+ language directions**
- Discovered hallucination driven failures in low-resource settings and showed hybrid methods improve BLEU by about **10 points**

Training-Free Object Counting Model with Prompt Noise (<https://alanzhong0601.web.app/projectPaper/SAM.pdf>)

- Implemented an **object counting pipeline** using **SAM + CLIP** for **zero-shot inference** without model retraining
- **Randomized** FSC-147 evaluations by sampling 100 images/trial from 6,146, to ensure unbiased, repeatable testing
- Evaluated robustness under point/box/text prompt noise, maintaining stable performance under most perturbations

Distributed Data Processing with Apache Spark

- Developed a multi-node **Spark cluster** (1 master, 3 workers) to simulate a **distributed file system** architecture
- Implemented **data partitioning, parallel processing, and fault tolerance** using **PySpark**
- Designed the system to simulate real-world **distributed storage and computation environments**