

Fangda Dai

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Skills

Languages: Python, TypeScript, C++, SQL, JavaScript, HTML5, CSS, C, Bash, Java, R, Kotlin,

Technologies: Git, RAG, LangChain, React, Angular, Node.js, MySQL, Linux, Azure DevOps, FastAPI

Certificates: Azure AI Fundamentals, Azure Fundamentals

Work Experience

AI Support Analyst

Sept 2025 – Dec 2025

Correctional Service Canada

Ottawa, ON

- Implemented business-requested features from Azure DevOps tickets end-to-end, contributing to iterative releases of an AI document search and retrieval tool (Python, **React**, Azure)
- Built the **RAG** retrieval layer by writing Python ingestion scripts to process and chunk **1,000+** PDFs, enrich metadata, generate embeddings, and automate Azure AI Search index creation
- Collaborated in weekly working sessions with **Microsoft** to plan the transition from development to production; contributed recommendations for future enhancements and delivered a **20-minute** briefing to managers on production readiness and next steps

AI Governance Project Assistant

Jan 2025 – Apr 2025

Immigration, Refugees and Citizenship Canada

Ottawa, ON

- Worked full-stack to develop an internal AI web app: Python backend (**LangChain**, LangGraph, OpenAI API), database setup, and RAG-based multi-agent workflows to improve efficiency across government departments
- Created and managed vector store indexes using Azure AI Search, implementing **hybrid search** to improve the accuracy and relevance of document retrieval
- Designed a self-reasoning node in the agent's workflow that filtered out approximately **30%** of the hallucinated responses, improving the reliability of agent outputs
- Built modular, reusable Angular front-end components to optimize user experience and ensure long-term maintainability

Instructional Support Assistant

May 2024 – Dec 2024, Jan 2026 – Apr 2026

University of Waterloo

Waterloo, ON

- Worked with professors to deliver CS246, an OOP course in C++ with over **250** students
- Created and maintained Bash/Python scripts to automatically test student submissions
- Conducted weekly tutorial sessions, addressed student inquiries during in-person office hours, and coordinated a group of **8** graduate teaching assistants for assignment grading
- Taught 2-hour review sessions before the exams, engaging over **100** students in each session

Projects

Portfolio Website (fangdadai.github.io/portfolio)

Dec 2023

- Designed a portfolio using React, JavaScript, and Tailwind CSS
- Deployed the website to Github Pages by modifying the GitHub workflow permissions

RAIInet

Nov 2023

- Developed a **2-player** (each with 8 pieces), turn-based strategy board game using C++
- Applied design patterns such as observer pattern and decorator pattern to update the gameboard after each move and add abilities to pieces at run-time

Education

University of Waterloo | Honours Bachelor, Computer Science

Sept 2022 – Present

- Recipient of President's Scholarship and International Entrance Scholarship (\$7,000)
- **Relevant Coursework:** Artificial Intelligence, Algorithms, Computer Vision, Operating Systems, Application Development, User Interfaces, Design Patterns, Numerical Computation