Chin Wei (Aiden), Mak

Toronto, ON | (204) 962-2406 | mcwaiden000@gmail.com | linkedin.com/in/mcwaiden | github.com/aidenmak0624

EDUCATION

University of Manitoba Winnipeg, MB
Bachelor of Science, Honours Computer Science – GPA: 3.5 *Sep 2020 – Jun 2025*
Relevant Coursework: Artificial Intelligence, Software Engineering, Databases, Distributed Computing, Data Structures & Algorithms, Machine Learning (Audit)

TECHNICAL SKILLS

AI/ML: Multi-Agent Systems, LangGraph, LangChain, RAG Pipelines, MCP (Model Context Protocol), Prompt Engineering, LLM Integration (OpenAI, Gemini)
Languages: Python, TypeScript, JavaScript, SQL, HTML/CSS
Frameworks: Flask, FastAPI, React, Next.js, Node.js, Tailwind CSS
Data & Vector DBs: PostgreSQL, Redis, Pinecone, ChromaDB, SQLAlchemy, Embedding Models, Document Chunking
DevOps & Testing: Docker, GCP Cloud Run, CI/CD (GitHub Actions), Pytest, Playwright E2E, Prometheus, Grafana, Git

PROJECTS

Human Resource Agent Platform – Full Stack Developer GitHub | Live Demo | Jan-Feb 2026
LangGraph, MCP/FastMCP, Python, Flask, React, GCP
- **Designed and orchestrated 8 specialized AI agents** using **LangGraph** with conditional routing, state management, and fault-tolerant error handling for complex multi-step HR workflows
- Built **MCP (Model Context Protocol)** server via **FastMCP** exposing 28 tools, 8 resources, and 5 prompts, enabling standardized LLM-to-application communication and plug-and-play agent extensibility
- Integrated **BambooHR MCP connector** for live HRIS data sync, and implemented **101 Python modules** with modular separation of concerns across agent, tool, and API layers
- Achieved **1,909 automated tests** (Pytest + Playwright E2E) with 90%+ coverage, deployed to **GCP Cloud Run** with Docker, CI/CD, and **Prometheus/Grafana** observability

Golden Fork – AI Restaurant Platform – Full Stack Developer GitHub | Live Demo | Jan-Feb 2026
Next.js, Pinecone, RAG, Stripe, WebSocket
- Built a **RAG pipeline** with **Pinecone** vector database for semantic restaurant search, implementing embedding-based retrieval with optimized chunking strategies for sub-second query response
- Designed **AI-powered recommendation engine** leveraging **LLM integration** to generate personalized dining suggestions based on user preferences and contextual menu data
- Engineered full-stack **Next.js / TypeScript** application with **real-time WebSocket** order tracking and **Stripe** payment integration for end-to-end transaction flow
- Implemented server-side rendering, dynamic routing, and responsive UI with **Tailwind CSS**, optimizing performance and user experience across devices

Human Right agentic RAG System – Full Stack Developer GitHub | Demo | Oct-Nov 2025
LangGraph, ChromaDB, RAG, Python, Flask
- Developed a **RAG (Retrieval-Augmented Generation)** pipeline chunking 112 document segments into **ChromaDB** vector store, reducing API response latency by **97% (6.8s → 0.2s)** through efficient embedding retrieval and caching
- Designed **5-tool workflow orchestration** system using **LangGraph** with conditional routing, state management, and structured output parsing for complex HR compliance queries
- Processed **25+ legal compliance documents** with automated text extraction, chunking, and vector embedding pipelines, ensuring accurate and up-to-date knowledge base for LLM grounding
- Wrote comprehensive test suites with **Pytest**, implemented structured logging, and maintained modular architecture following **software engineering best practices**

INDUSTRIAL EXPERIENCE

Canadian Museum for Human Rights – Applied AI Developer Sep 2024 – Apr 2025
University of Manitoba Partnership
- Developed an interactive educational web application integrating **Gemini LLM API** to power 6 learning modules with **NLP-driven content generation** and dynamic prompt engineering
- Collaborated in an **Agile/Scrum** team with designers and product stakeholders, delivering iterative releases with clean, well-documented codebase

INTERESTS

Coffee, Hiking, Travelling, Badminton, Open Source, LLM Agents, Prompt Engineering