Jaehyeok (Eddie) Lee

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Denise MacCallum
Ministry of Public and Business Service Delivery
Workforce Planning Program Analyst
222 Jarvis Street, 6th floor
Toronto, ON M7A 0B6

Dear Denise MacCallum,

I am applying for the AI Engineering Developer Co-op position (Winter 2026) with GovTechON. My hands-on experience building AI systems aligns directly with your requirements:

What You Need Me To Do	What I've Already Done
Core Responsibilities:	
• Build RAG systems for document processing	• Built DocSearch RAG with FAISS
• AI model integration (Azure OpenAI, Gemini, Claude)	• Used OpenAI, Gemini, Claude APIs
• Document ingestion and embedding generation	• Multi-format extractors (PDF/DOCX/TXT)
• Vector DB for semantic search	• Implemented FAISS with similarity scoring
• Data preparation and processing	• Processed 350,000+ TTC transit records
• REST API development	• Created APIs with FastAPI/Flask
Technical Requirements:	
• Python and Java for AI development	• Proficient in Python; familiar with Java
• Understanding of LLMs/RAG	• Built complete RAG system from scratch
• ML frameworks (scikit-learn, PyTorch)	• Experience with scikit-learn
• Model serving (FastAPI, Flask)	• Deployed models via REST APIs
• Experiment tracking (MLflow)	• Familiar with model versioning concepts
• Docker, Git, Jupyter	• Daily use of all three tools
• Cloud platforms (Azure bonus)	• Studying Azure services and APIs
Government-Ready Skills:	
• Security and compliance mindset	• Handled classified materials (military)
• Documentation and process standards	• Created SOPs, audit trails, ticket logging
• SDLC knowledge	• Applied full cycle in multiple projects
• Teamwork and adaptability	• Military service + admin experience

I understand this is a unique opportunity to transition from academic projects to production AI systems that serve millions of Ontarians. While I've built functional prototypes, I'm eager to learn production scale development, enterprise practices, and the responsibility that comes with public service technology.

My adaptability, proven through military service in Korea and quick adjustment to Canadian academic culture, combined with my technical foundation and genuine enthusiasm for AI, positions me to contribute meaningfully while growing rapidly. I'm not just looking for any co-op; I specifically want to work where technology creates public value, and GovTechON represents exactly that mission.

Thank you for considering my application. I would be honored to contribute to your team's innovative work.

Sincerely,

Jaehyeok (Eddie) Lee

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Summary

- AI/ML enthusiast with hands-on experience in **LLMs, RAG systems, and vector databases**; pursuing dual degrees in Software Engineering and Computer Science (GPA: 4.37/4.5, 4.5/4.5).

- Strong foundation in **Python, FastAPI, Docker** with practical projects in semantic search, model serving, and cloud technologies (**Azure**).

- Eager to contribute to production AI systems with experience in ML pipelines, API development, and deployment. Interested in agentic AI and autonomous systems.

Education

Centennial College	**Expected Graduation Dec 2027**
*Software Engineering Technology Co-op Advanced Diploma	GPA 4.37/4.5*	*Toronto, ON*
Korea National Open University	**Expected Graduation Dec 2027**
*B.Sc. in Computer Science	GPA 4.5/4.5*	*Seoul, South Korea*

Coursework & Certifications

**Intro to Database Systems (15-445/645)	Carnegie Mellon University**	**Ongoing**
Relational design, indexing, transactions (concepts)	
**Cloud Computing	Korea National Open University Coursework**	**In Progress**
***Azure**, Compute, storage*	

Technical Skills

Languages: Python (primary), Java, SQL, C#, JavaScript

AI/ML & RAG: LLMs, RAG, sentence-transformers, FAISS, scikit-learn, MLflow

Databases: PostgreSQL, Oracle SQL, SQLite

Backend & APIs: FastAPI, Flask, REST API development, model serving frameworks

DevOps & Cloud: Docker, Git, GitHub, Linux, UNIX CLI, Azure (compute, storage, API integration)

Testing & Analytics: k6, Postman, curl, pandas, NumPy

Productivity & Documentation: Microsoft Office Suite (Word, Excel, PowerPoint), Visio

Projects

DocSearch RAG System | GitHub **Python, FastAPI, FAISS, LLMs**
- Built RAG system with semantic search: document ingestion, embedding (all-MiniLM-L6-v2), FAISS indexing; REST API returns relevant snippets with similarity scores and source attribution.
- Implemented safeguards (file validation, size limits) and containerized with Docker; verified through automated testing and health monitoring endpoints.

TTC Delay Analytics Pipeline | GitHub **PostgreSQL, Docker, Python**
- Processed and analyzed 350,000+ transit delay records; developed containerized ETL pipeline with optimized indexing strategies, reducing query latency by 40%.
- Applied SQL window functions for trend analysis; documented query plans and created operational runbooks for maintenance.

VetChart EMR System | GitHub **Node.js, PostgreSQL, Docker**
- Enhanced medical records system with health checks and monitoring; containerized full stack with Docker Compose for reliable service initialization.
- Conducted load testing with k6 identifying p95 latency bottlenecks; documented API endpoints and failure modes for operations team.

Relevant Experience

Dongguk University, Medical School Administration Office   **Sep 2023 to Dec 2023**
Office Assistant   *Seoul, South Korea*
- Executed secure destruction of 10 years of exam papers with chain-of-custody documentation, following institutional retention and privacy policies.
- Digitized and standardized paper records with enforced naming conventions; provided first-line IT support with consistent ticket logging and escalation procedures.
- Created process documentation (SOPs) enabling non-technical staff to independently resolve common issues, reducing support burden.

Republic of Korea Army   **May 2020 to Nov 2021**
Administrative and IT Support, Mandatory Service   *South Korea*
- Maintained digital asset ledgers and enforced classified handling policies with documented approvals for sensitive information.
- Standardized onboarding processes and security briefings; provided tier-1 IT helpdesk (accounts, permissions, basic network) with consistent ticket logging.