

# Amelia Kemp

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## TECHNICAL SKILLS

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**Languages:** C/C++, Python, JavaScript/TypeScript, Java, HTML, CSS, SQL, Assembly

**Frameworks/Libraries:** React.js, Node.js, GraphQL, Git, Bash, Linux, Milvus, iPerf3, Flent, TailwindCSS

**Developer Tools:** AWS, Postman, MongoDB, MySQL, Git, Docker, VSCode, IntelliJ, Studio 3T, Maven, PostgreSQL

## EXPERIENCE

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### Java Backend Developer

September 2025 - December 2025

*Vivid Seats LLC*

Toronto, ON

- Queried and validated **MongoDB** test data using **Studio 3T**, **Postman**, and **GraphQL**, and integrated checks into **Maven**-based test pipelines
- Removed hard dependencies between test cases by introducing isolated test data setup/teardown, eliminating recurring flaky failures caused by shared state
- Built and maintained end-to-end **Java** tests using **JUnit** and OOP patterns to validate **GraphQL**-backed features across API, data, and business-logic layers

### Cloud Solutions Developer

January 2025 - April 2025

*March Networks*

Ottawa, ON

- Deployed **AWS** backend for hosted AI models via **boto3** in **Python** and **Flask**; integrated **Milvus** vector database
- Added **AWS Bedrock Guardrails** to the AI Search product via **boto3** in **Python** to moderate user queries
- Improved search results by architecting a false-positive filtering feature using **Amazon Nova** via **boto3** in **Python**
- Built an image retrieval benchmark to evaluate multimodal embedding models (e.g., CLIP, Jina CLIP, Titan)

### Networking Research Associate

June 2024 - August 2024

*Algonquin College Applied Research*

Ottawa, ON

- Researched techniques for achieving low latency, low loss, and scalable throughput of packets in networks
- Recompiled the **Linux** kernel to test different congestion control algorithms using **iPerf3**
- Built a testing network with PCs, routers, and switches for **optimizing WiFi 7 performance**

### AI Solutions Developer

June 2024 - August 2024

*University of Waterloo*

Ottawa, ON

- Designed an investment bot leveraging **Azure AI Services** (Bot Services, ML) to personalize advice
- Created a pipeline for data collection, model training, API integration, and deployment using **Azure Cloud**
- Earned Microsoft Azure (AZ-900) and AI Fundamentals (AI-900) Certifications and presented the solutions

## PROJECTS

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### Reci - Recipe Sharing Web App | *TypeScript, SQL, Express, React, Tailwind CSS, Docker, PostgreSQL*

- Built backend with TypeScript, Express, SQL, and PostgreSQL, adding follower endpoints and automated recipe-saving via SQL triggers
- Optimized database performance with indexes and wrote TypeScript object types
- Connected backend to React modals with Tailwind CSS and managed environments using Docker

### Product Joy Predictor - Chrome Extension | *JavaScript*

- Used the Laplacian Succession Theorem to calculate the probability of a user enjoying a product
- Built and deployed a Chrome extension for Amazon.ca and Amazon.com using JavaScript with 8 active users

### Personal Website | *HTML, CSS, JavaScript, Git*

- Designed and developed a personal website with HTML, CSS, and JavaScript to showcase software projects
- Employed version control with Git and GitHub, published the website using a custom domain

## EDUCATION

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### University of Waterloo, Bachelor of Software Engineering

Expected May 2028

- Relevant Courses: Databases (**SQL**), Operating Systems (**C++**), Compilers (**C**), Digital Computers (**Assembly**), Algorithms, Object Oriented Programming (**C++**), User Interfaces (**JavaScript/TypeScript**)