

# FELIX XIE

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## EDUCATION

### University of Waterloo

Bachelor's of Computer Science

CFM Scholarship, International Experience Award, and President's Scholarship Recipient (\$7500)

Sept 2022 - April 2027

3.9/4.0 GPA

## SKILLS

Languages: Python, Java, JavaScript, TypeScript, C++, C, C#, Ruby, R, SQL, GraphQL  
Frameworks/Tools: NodeJS, Flask, FastAPI, .NET, React, Angular, CMake, Boost, Rails  
Database: MySQL, Elasticsearch, MariaDB, MongoDB/NoSQL, Redis  
DevOps: Docker, K8s, Azure, AWS, GCP, Jenkins, Kafka, Terraform, Linux, Github Actions

## EXPERIENCE

### Amazon

Software Development Engineer

Vancouver, BC

September 2025 - November 2025

### Meta

Production Engineer

Bellevue, WA

May 2025 - August 2025

- Engineered pipelines for advertisement data in C++ and Python to detect off-site conversion signal regression, **reducing signal loss by 34%** and improving the reliability of metrics for millions of advertisers.
- Built a high-throughput monitoring and alerting system processing **billions of rows daily** across 12 ad signals, **halving SEV response times** and enabling faster detection of aggressive SLO burn rates.
- Developed a daily statistical-significance Python pipeline for ad accounts and campaigns, slashing response time to regressions and **averting over \$100K in ad-spend losses** within a week of launch.
- Automated oncall runbooks with asynchronous rule-based analysis, reducing root cause investigation time by **99%**.

### Shopify

Software Engineer - Backend

Toronto, ON

September 2024 - December 2024

- Developed a Rails **geolocation service** and refactored Action View components for the Shopify portal.
- Improved Kafka topic processing and erasure job SQL query generation to support **BigQuery table redactions indexed by cookie IDs**, increasing personally identifiable information (PII) erasure coverage from **22% to 100%**.
- Built a pipeline failure notifier job for GitHub and Buildkite CI/CD pipelines with GitHub issues API and Slack API integration, **cutting SEV-3 incident response times across 78 services** and improving observability.

### Sparklease

Full Stack Developer

Toronto, ON

January 2024 - August 2024

- Architected and implemented a C# **Redis caching layer** for microservices, integrated with an edge CDN and Azure Blob Storage, optimizing API response times from **1.5s to 0.3s** for high-traffic services.
- Engineered a payment and subscription gateway using ASP.NET Core MVC and Stripe webhooks, processing **\$30k/month**, as well as an **analytics dashboard** using SQL and Javascript to boost financial reporting efficiency.
- Spearheaded a **100% codebase migration** from .NET Core 2.0 to 6.0, improving performance and compatibility.

### RBC

Software Engineer - Security Infrastructure

Toronto, ON

May 2023 - August 2023

- Built and deployed a containerized **service update anomaly job** for Azure and AWS cloud services with Python using machine learning classification on OpenAPI schemas and web scraping, saving over **\$7000** per service reviewed.
- Established CI/CD pipelines with Jenkins on AKS integrated with **10+ control tools**.
- Implemented robust Terraform IaC for Azure Kubernetes clusters, enabling egress to secure OpenAI instances.

### RBC

Innovation Developer

Toronto, ON

July 2022 - August 2022

- Enhanced **UI/UX** via SCSS data themes and created **over 20 Angular components** to promote code reusability.
- Refined a backend data store by integrating an **Elasticsearch-indexed web crawler** in a FastAPI service.

## PROJECTS

### ASCII Game Engine C++

- Architected a 2D game engine in C++, adhering to **MVC architecture** and **SOLID principles**; incorporated **advanced design patterns** for efficient core and object management.
- Features cross-platform console-based rendering, event-driven input, collision detection, dynamic world state with multi-layered rendering, and frame-based animation, all powered by ncurses.