

# Catherine Xie

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## SKILLS

- **Languages:** Python, JavaScript/TypeScript, C/C++, C#, Ruby, Go, Kotlin, SQL (MySQL, PostgreSQL), HTML/CSS
- **Frameworks:** Flask, Django, Pandas, React, Next.js, Angular, Node.js, Express.js, Ruby on Rails, MongoDB
- **Tools:** Git, Linux, GCP, AWS, OAuth, Firebase, GraphQL, Docker, Kubernetes, CircleCI, OpenAI, Agile, Figma

## EDUCATION

### University of Waterloo

Graduating Apr 2025

*Bachelor of Computer Science, Honours, Co-operative Program*

- **Relevant courses:** Application Development, Databases, Distributed Computing, OOP, Data Structures & Algorithms, Computer Networks, Operating Systems, User Interfaces, Human-Computer Interaction

## EXPERIENCE

### Software Engineer Intern

Sept 2024 – Dec 2024

*Marketing Kitchen Inc.*

*Markham, ON*

- Scaled IoT work-hour tracker scanner system to handle **10,000+** daily requests with a load balancer in **Go**
- Engineered failover mechanism in scanner system using **REST** and **SOAP** middleware, resolving **100+** reported scanner downtime incidents, reducing human errors by **80%** and saving **4 hours** of operational time per week
- Spearheaded the design and development of a job order portal streamlining real-time collaboration, reducing weekly correspondence by **40%**, using React, **C#**, **MSSQL**, **SMTP**, and **AWS Cognito** for user authentication

### Software Engineer Intern

May 2024 – Aug 2024

*Justworks*

*Toronto, ON*

- Researched and proposed a technical specification and proof of concept outlining **3** strategies to securely handle and display client PII, documenting trade-offs and addressing security risks to safeguard client data privacy
- Implemented a data serializer pattern in **Ruby on Rails**, leveraging **OAuth** scopes to redact sensitive employee PII of **12,000+** users in **20+** countries, enhancing data compliance with global standards and regulations

### Software Engineer Intern

May 2023 – Aug 2023

*Toronto Transit Commission*

*Toronto, ON*

- Automated Windows OS and security updates using a **Powershell** script, ensuring the installation of necessary dependencies and prerequisites, reducing downtime by **20%** across **5,000+** production machines
- Standardized and deployed software configurations and device imaging across **1,200+** machines for employees and executives, improving system consistency and ensuring uniformity in software performance and security

### Project Developer

May 2023 – Aug 2023

*UW Blueprint - Focus on Nature*

*Waterloo, ON*

- Built registration flow for camper and admin users using **MERN** tech stack for local non-profit aimed to promote youth summer camps, handling registrations of **7,000+** children per year
- Implemented robust code to gracefully handle invalid refund requests, coupons, and discounts using **Stripe API**, reducing payment failures by **30%** and ensuring seamless payment processing for customers

### Full-Stack Engineer Intern

Sep 2022 – Dec 2022

*Empire Life Insurance*

*Toronto, ON*

- Led a cross-functional team in the design and development of a bilingual glossary feature in the customer portal to clarify insurance terminology to **1,500+** weekly customers
- Developed Registered Retirement Savings Plan page with **Django** and **React** used by **2,500+** weekly advisors to manage retirement savings

### Application Developer Intern

Jan 2022 – Apr 2022

*Bank of America Securities Inc. (previously Bank of America Merrill Lynch)*

*Toronto, ON*

- Developed the tax billing and collateral pricing pages of the transaction dashboard used by financial advisors for client trade management and monitoring, using **Angular** and **Node.js**
- Wrote **30+** test-driven development Jasmine unit tests to validate CRUD functionality and filtering in the transaction dashboard, ensuring reliable transactions for financial advisors and improving test coverage by **30%**