Catherine Xie

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Skills

- **Languages:** JavaScript/TypeScript, Python, C/C++, C#/.NET, Ruby, Go, Kotlin, SQL (MySQL, PostgreSQL), HTML/CSS
- **Frameworks & Libraries:** React, Angular, Node.js, Express.js, Django, Flask, Ruby on Rails, Pandas, MongoDB
- **Tools:** Git, Linux, Apache Spark, AWS, GCP, GraphQL, Docker, Kubernetes, CircleCI, REST/SOAP APIs, Figma

Education

University of Waterloo   Graduated Jun 2025

Bachelor of Computer Science, Honours, Co-operative Program (Graduated with Distinction — GPA: 3.7/4.0)

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

Experience

Software Engineer Intern   Sep 2024 – Dec 2024

Marketing Kitchen Inc.   Markham, ON

- Spearheaded the design and development of a job order portal with React, C#, MS SQL, SMTP, AWS Cognito to streamline real-time collaboration between clients and internal teams, reducing weekly correspondence by **40%**
- Scaled IoT employee time-tracking scanner system in Go to handle **10,000+** daily requests with load balancer, reducing average latency from **300ms to 100ms** at peak usage
- Engineered critical failover mechanisms in scanner system using REST and SOAP middleware, resolving **100+** reported downtime incidents, reducing data sync errors by **80%** and saving **4 hours** of operational time per week

Software Engineer Intern   May 2024 – Aug 2024

Justworks   Toronto, ON

- Programmed a data serializer pattern in Ruby on Rails, leveraging OAuth scopes to dynamically redact sensitive PII for **12,000+** employees across **20+** countries, ensuring data compliance with global data privacy standards
- Authored technical specifications outlining PII redaction strategies, architectural trade-offs and security safeguards
- Optimized bundle size with route-based code splitting and lazy loading, improving Lighthouse LCP by **30%**

Software Engineer Intern   May 2023 – Aug 2023

Toronto Transit Commission   Toronto, ON

- Automated Windows OS and security updates using Powershell scripts, integrating patching workflows with internal deployment pipelines across **5,000+** production machines, reducing system downtime by **20%**
- Deployed standardized software and environment configurations across **1,200+** employee devices, improving system consistency and ensuring uniform application performance and security compliance

Project Developer   May 2023 – Aug 2023

UW Blueprint - Focus on Nature   Waterloo, ON

- Built the registration flow for camper and admin users using MERN stack, handling **7,000+** annual registrations for local non-profit promoting youth summer camps
- Programmed robust payment handling logic with Stripe API, managing invalid refund requests, coupons, and discounts, reducing payment failures by **25%** and ensuring seamless, reliable transactions for users

Full-Stack Engineer Intern   Sep 2022 – Dec 2022

Empire Life Insurance   Toronto, ON

- Led a cross-functional team in the design and development of bilingual glossary tool used by **1,500+** weekly users, ensuring AODA and WCAG 2.0 Level AA compliance using WAVE while improving insurance terminology literacy
- Developed the Registered Retirement Savings Plan dashboard with Django and React used by **2,500+** advisors weekly to efficiently view and manage retirement savings, streamlining workflows and improving data accessibility

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 for financial advisors, using Angular and Node.js, enabling efficient client trade management and monitoring
- Coded **30+** TDD Jasmine test suites to validate CRUD logic, data filtering and API integrations in the dashboard, improving test coverage by **30%** and increasing system reliability across CI/CD deployments