

Jocelyn Xu

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SKILLS

- **Languages:** Javascript/TypeScript, Java (OOP), Python, C, SQL, Shell scripting, HTML, CSS
- **Frameworks:** React, Angular, Tailwind, Flask, FastAPI, Next.js, Express.js, Java Swing, Three.js
- **Tools:** AWS, PostgreSQL, Docker, Postman, Node.js, Figma, Sentence Transformers

EDUCATION

University of Waterloo (UW) <i>Computer Science, Honours, Co-op Program</i>	Sept 2024 – Apr 2029 Waterloo, ON
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- CAV: 95.3

EXPERIENCE

Bank of Montreal (BMO) Software Developer <i>Online Banking for Business Help Center AI Chatbot</i>	May 2025 – Dec 2025 AWS Lambda, Bedrock, DynamoDB, API Gateway, S3
<ul style="list-style-type: none">Developed serverless RAG chatbot using AWS Lambda, Bedrock (Claude), and S3 knowledge bases, implementing WebSocket rooms for persistent chat history and in-session memoryDeveloped multi-agent routing system with supervisor-collaborator agent architecture to classify query intent and orchestrate agent selection for task execution, improving accuracy and reducing latency by 35%Automated web scraping pipelines using puppeteer to extract documentation from Online Banking for Business Single Page Applications, storing 100+ embedded documents in S3 buckets for Knowledge Base retrieval	

<i>Lexicon Design System (LDS)</i>	Angular, Typescript, Storybook, Figma
<ul style="list-style-type: none">Created 15+ responsive and WCAG 2.2 AA accessible Web Components, driving migration from Angular to framework-agnostic components, expanding the LDS adoption to 300+ developers and UI/UX teams across BMOAutomated 250+ unit tests with Jest and Playwright for LDS components, preventing 360+ bugs across SIT environments and boosting developer efficiency by 48%, saving BMO hundreds of thousands of dollars in operational costs while ensuring consistent, accessible UI/UX across productsManaged bi-weekly releases with semantic versioning and branching workflows, publishing bundled builds to the JFrog Artifactory as internal NPM packages used across BMO products serving 60,000+ clients	

UW Data Science Club (UWDSC) Datathon Coordinator, Developer, VP Development	Dec 2024 – Present
<ul style="list-style-type: none">Led a team of 8 developers to create hacker and admin application portal for CxC (Waterloo's largest student-run AI hackathon) with 500+ users, integrating QR code and NFC tag check-in to streamline event operationsDeveloped GitHub Actions CI/CD workflows integrating Infisical for centralized secrets management and Discord webhooks, enabling automated deployment preview notifications and issue tracking while reducing manual project management overhead from minutes to secondsMigrated to monorepo and database from MongoDB to Supabase by redesigning normalized relational schemas, refactoring backend into layered Controller-Service-Repository architecture, and redesigning website with Shadcn/ui to improve code maintainability, consistency, and query efficiency	

PROJECTS

Fashionkilla <i>React, Tailwind, MongoDB, FastAPI, Gemini API, Sentence Transformers</i>	Oct 2025
<ul style="list-style-type: none">Built an AI fashion recommendation system using SentenceTransformer for vector embeddings and cosine similarity for outfit matching, implementing FastAPI CRUD endpoints for user closet and image managementIntegrated Google Gemini API for clothing image metadata extraction, caching pre-computed vector embeddings alongside base64-encoded images in MongoDB to reduce redundant calculations and achieve optimal recommendation performanceWon best use of MongoDB and best UI/UX at TechNova 2025	

UWDSC Website <i>React, Next.js, Typescript, Tailwind, MongoDB, Formik</i>	May 2025 – Sept 2025
<ul style="list-style-type: none">Implemented full-stack application portal with REST API CRUD endpoints following MVC architecture with MongoDB backend, including dynamic form generation with Formik/Yup validation schemas and debounced auto-save to local storage for 150+ applicantsBuilt responsive admin dashboard with pagination, application analytics, and CSV export functionality processing nested JSON structures into flattened tabular format with dynamic role-specific column generationBuilt real-time attendance tracking system with Redux state management and GET endpoints for live event polling and check-in patching, featuring role-based authentication to process 250+ check-ins per event	

ResuMix <i>Python, Flask, React, Vite, NeonDB, Sentence Transformer, OpenAI</i>	Aug 2025
<ul style="list-style-type: none">Developed an AI-powered resume optimizer using Sentence Transformers for semantic similarity scoring to rank resume content with job descriptionsGenerated tailored resume PDFs via custom styled ReportLab template within minutes through connection pooling and batch operationsDesigned NeonDB PostgreSQL schema for user authentication and nested resume data storage, enabling dynamic LaTeX export and parameter-based optimization with adjustable weights for ATS keyword matching	