JOCELYN XU

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EDUCATION

University of Waterloo   Sept 2024 – Apr 2029
Computer Science, Honours, Co-op Program   *Waterloo, ON*
- CAV: 95.3

EXPERIENCE

Bank of Montreal (BMO) Software Developer | *Online Banking for Business*   May 2025 – Dec 2025
Help Center AI Chatbot   *AWS Lambda, Bedrock, DynamoDB, API Gateway, S3*
- Architected a **serverless RAG chatbot** using **AWS Lambda** and **Amazon Bedrock**, implementing **WebSockets** for real-time response streaming to drive a **30%** increase in internal company queries
- Engineered a **multi-agent routing** system using a **supervisor-collaborator** architecture to classify query intent and execution, increasing response accuracy and reducing latency by **35%** through optimized **agent selection**
- Eliminated **20+ hours** of monthly manual data entry by engineering an **automated pipeline** with **Puppeteer** to scrape and index **125+** Online Banking documents into **S3 buckets**

Lexicon Design System (LDS)   *Angular, TypeScript, Storybook, Figma*
- Scaled **LDS** adoption to **300+ developers** by developing **15+ framework-agnostic web components** to replace legacy Angular components, ensuring universal **WCAG 2.2 AA** compliance across all platforms
- Improved **code coverage to 80+%** by automating **250+ Jest and Playwright** tests to resolve **360+ bugs**, yielding **$200K+** in savings through the elimination of manual QA
- Streamlined delivery for **BMO products serving 60,000+ clients** by orchestrating **bi-weekly releases** with **semantic versioning** and publishing bundled builds to **JFrog Artifactory** as internal **NPM packages**

Data Science Club VP Development   Dec 2024 – Present
- Led the development of a **full-stack website** for an **AI hackathon** serving **1,000+ users**, integrating **QR code and NFC check-in** to reduce average processing time from a **manual 1 minute** process to **under 5 seconds**
- Automated infrastructure for development teams by engineering **GitHub Actions CI/CD workflows** with **Infisical** secrets management and **Discord webhooks**, reducing manual project management overhead from **5+ minutes to seconds** via automated deployment previews and issue tracking
- Refactored backend to a **Controller-Service-Repository architecture** during a **MongoDB to Supabase migration**, implementing **relational schemas** and **Row-Level Security** to boost **data integrity** and query efficiency by **40%**

PROJECTS

Fashionkilla | *React, Tailwind, MongoDB, FastAPI, LLM, Sentence Transformers*   Oct 2025
- Engineered an AI fashion recommendation engine using **Sentence Transformers** for **vector embeddings**, implementing **cosine similarity** for **semantic retrieval** and **FastAPI** for CRUD operations
- Architected a data pipeline using **Google Gemini** for **image context extraction**, optimizing latency by caching **vector embeddings** and **image encoded data** in **MongoDB** to eliminate redundant API data calls
- Recognized with **Best Use of MongoDB** and **Best UI/UX** at TechNova 2025

Data Science Club Website | *React, Next.js, TypeScript, Tailwind, MongoDB, Formik*   May 2025 – Sept 2025
- Engineered a **full-stack** club portal with **CRUD endpoints** and **MVC architecture**, implementing **event debouncing** and **Formik/Yup validation** for data persistence and integrity for **210+** applicants
- Built a real-time check-in system using **Redux** to manage **250+ concurrent check-ins**, implementing **role-based access control** and **PATCH** operations for global state synchronization

ResuMix | *Python, Flask, React, Vite, NeonDB, Sentence Transformers, ReportLab*   Aug 2025
- Developed a **resume ATS optimization tool** using **Sentence Transformers** and **DP algorithms**, outperforming legacy GPT-wrappers with a **30% accuracy gain** and **2000+ms reduction** in inference latency
- Architected a **NeonDB** backend with **connection pooling** and **batch commands** to handle **high-concurrency** traffic, improving query performance by **45%** during PDF generation

SKILLS

- **Languages:** Python, C/C++, TypeScript, SQL, HTML, CSS, Java, Bash
- **Frameworks/Tools:** React, Angular, Tailwind, Flask, FastAPI, Next.js, Express.js, Three.js, AWS, PostgreSQL, Docker, Postman, Node.js, Figma