Shirley Ding

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Education

McGill University Montréal, QC
Bachelor of Science in Computer Science *Aug. 2023 – May 2027*

- **Awards**: Girls Who Hack 2024 - 1st overall, McHacks 12 - People's Choice, McGame Jam 2025 - Best Art
- **Coursework**: Operating Systems, Concurrent Systems, Advanced Database Systems, Cybersecurity

Technical Skills

Languages: Python, Java, Kotlin, Go, C#, JavaScript, TypeScript, SQL, HTML/CSS
Frameworks & Libraries: React, .NET, Node.js, Jest, Cypress, JUnit
Cloud & Tools: AWS, Docker, Git, Bash, Linux, MCP
Databases & Storage: PostgreSQL, SQL Server, DynamoDB

Experience

Amazon May 2026 – July 2026
Software Engineer Intern *Vancouver, BC*

- Optimized a **DynamoDB**-backed API serving **5,800+** executions by implementing **backward-compatible pagination and filtering**, reducing data volume for downstream AI agents.
- Streamlined AI-assisted investigation by developing APIs to query **AWS Step Functions** execution histories, collapsing multi-system debugging into a single query.
- Implemented an **MCP server** exposing service APIs as callable tools, enabling agents to perform natural-language queries over workflow data.
- Reduced client onboarding time by **50%** by consolidating tribal knowledge from historical workflows, tickets, and PR discussions into structured context for an **AI agent** generating Step Functions and **Kotlin** configurations.

Dayforce Jan. 2025 – Aug. 2025
Software Engineer Intern *Remote*

- Secured **40+ core API endpoints** by refactoring them to adopt strongly-typed model binding, **eliminating SSRF vulnerabilities** and improving input validation.
- Prevented regressions and ensured release stability by writing **200+ automated tests** across unit, integration, and end-to-end testing to validate bug fixes, new features, security fixes, and increase code coverage.
- Led the final release process for Position Management 2.28.0 and 2.29.0 as Release Representative; coordinated sanity testing and provided sign-off, ensuring two stable deployments to production.

Hack4Impact McGill Feb. 2025 – Present
Software Developer *Montreal, QC*

- Engineered the backend infrastructure using **Next.js** and **PostgreSQL** for ResilienceMTL to automate grant and expense tracking, replacing manual processes to accelerate fund deployment to community homelessness programs.

Projects

University Appointment Booking Platform | *React, Node.js, Express, SQLite* Mar. 2026 – May 2026

- Built backend authentication, course management, and email notification systems for a full-stack appointment booking platform, supporting role-based access, password recovery, and automated appointment notifications.

AI Flashcard Generator | *React, PostgreSQL + Prisma, Supabase (Auth), Docker* Jun. 2025 – Aug. 2025

- Engineered a full-stack language learning app that reduced flashcard creation time from **5 minutes to 10 seconds** by automating study card generation via the **DeepSeek API** for context-aware translations, syncing with Anki.

Leadership

VP Sponsorship May 2025 – May 2026
Women In Tech McGill *Montreal, QC*

- Drove a **4x increase in sponsorship revenue to $12,000** by securing **8 corporate partners** (Amazon, Morgan Stanley) and leading collaboration to deliver events for **500+ students**.