

Dawson Lu

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EDUCATION

Georgia Institute of Technology

Master of Science in Computer Science

Sept 2024 – Exp. Aug 2026

Atlanta, GA

University of Waterloo

Bachelor of Science in Electrical Engineering

Sept 2017 – May 2023

Waterloo, ON

EXPERIENCE

Software Engineer

Stryten Energy

Oct 2023 – Present

Atlanta, GA

- Lead development of a facility-wide Manufacturing Execution System (MES) handling real-time production data, work orders, and performance metrics across multiple production lines serving thousands of daily transactions.
- Designed and implemented secure REST APIs in Java with JWT-based authentication and role-based access control, enabling reliable service-to-service communication across distributed systems.
- Architected backend integrations between PostgreSQL/MSSQL databases and third-party systems, improving data traceability, reducing manual reporting overhead, and ensuring high system uptime.
- Developed C# services for automated data acquisition and validation pipelines, integrating with SQL databases to process and store high-throughput equipment telemetry.
- Collaborated cross-functionally with IT, operations, and engineering teams to ensure system scalability, network security, and reliability in production environments.

Software Engineer

Extreme Networks

Sept 2022 – Dec 2022

Toronto, ON

- Developed automated test suites using Python and Pytest to validate controller, access point, and mobile client functionality across distributed network infrastructure.
- Architected end-to-end mobile testing automation using Selenium, Appium, and UIAutomator, improving test coverage and reducing manual QA cycles.
- Built a time-tracking web application using Django with REST endpoints, enabling project-level hour logging for management teams.

Automation Engineer

ABC Technologies

Jan 2022 – Apr 2022

Toronto, ON

- Prototyped custom GUI solutions using Raspberry Pi and Python for automated test fixtures, reducing hardware costs and increasing system availability.
- Developed reusable template programs to reduce manual configuration and testing time across production lines.

PROJECTS

Quotability | *Kotlin, Android SDK, Retrofit, YouTube Data API, SQLite, Glide*

- Built an Android app to search and filter YouTube captions, integrating the YouTube Data API for metadata retrieval and keyword-based caption parsing with efficient network communication via Retrofit.
- Implemented SQLite for offline data persistence and designed a responsive UI using Jetpack components and Material Design.

SimplyShop | *Swift, iOS SDK, Firebase Auth, MongoDB, Grocery Database API, CoreML*

- Developed an AI-powered grocery recommendation app using CoreML models for personalization based on dietary preferences and budget constraints.
- Integrated Firebase Auth for secure authentication, MongoDB for user profile storage, and external APIs for real-time product and pricing data.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, C#, Go, SQL (PostgreSQL, MSSQL)

Backend & APIs: REST API Design, JWT Authentication, Spring Boot, .NET, FastAPI, Django

Databases: PostgreSQL, MSSQL, MongoDB, MySQL, Snowflake

Infrastructure & Tools: Docker, Git, Linux, Google Cloud Platform, CI/CD