Max Lu

max.lu@uwaterloo.ca | RedcXca | maxzylu | redcx.ca

SKILLS

- **Languages:** Go, C++, SQL, Java, Python, JavaScript, TypeScript, Ruby, HTML, CSS, C#
- **Technologies:** Git, Svelte, React, Flask, Next.js, PostgreSQL, Ruby on Rails, Linux, AWS, MongoDB, Kafka

WORK EXPERIENCE

Geotab **Jun 2025 – Aug 2025**
Software Engineering Intern *Toronto, Canada*

- Migrated tools platform from React to **Next.js**, using server-side rendering to reduce initial load times by **80%**
- Developed LLM-powered scripts to generate metadata and summaries for **500+** documentation pages, improving SEO and enabling faster indexing + semantic search
- Created **C#** middleware to enable live tracking of vehicles, pipelining data to law enforcement for recovery

TikTok **Sept 2024 – Dec 2024**
Software Engineering Intern *Vancouver, Canada*

- Enhanced internal tools using **Go** to display advertiser details and reduce developer reliance on other teams
- Extracted and transformed **30,000+** customer data from **Hive** and **MongoDB** using RPCs and message queues which improved internal service operation speeds by **35%**
- Developed **ElasticSearch** data streaming pipelines using **Kafka** and event handlers to preserve data integrity
- Documented and refactored legacy code using modern standards and libraries to enhance maintainability

Tuq Inc. **Jan 2024 – Aug 2024**
Software Engineering Intern *Toronto, Canada*

- Designed **PostgreSQL** schemas to support **REST APIs** functionalities built with **Ruby on Rails**
- Implemented **OAuth** to integrate various third-party APIs like Jira and Accuro to expand app functionality
- Used gems to enable core app functionalities including notifications, payment, and PDF rendering

PROJECTS

GooseGooseGo **April 2024**

- Developed a full-stack web application enabling user authentication and restaurant/item review submissions
- Implemented backend endpoints using **Python & Flask** and built the frontend with **TypeScript & Svelte**
- Created a **MySQL** database on **AWS RDS** to store detailed information of 500+ Google scraped restaurants

The Artificial Picasso **Dec 2022**

- Constructed a robotic arm capable of drawing on paper with servo motors (and a pen) via image inputs
- Built a graphical user interface offering tools such as image cropping and lineart sensitivity adjustment
- Developed algorithms in **Python** using **OpenCV** to convert images into arcs for the robotic arm to draw

AWARDS

Euclid Math Contest — Top 1.5% out of 20000 **2021**
Canadian Computing Competition (CCC) — Top 5% out of 4000 **2021**
American Invitational Mathematics Examination (AIME) — Top 12 in Canada **2020**

EDUCATION

University of Waterloo **2022 - 2027 (Expected)**
Bachelor of Software Engineering, Artificial Intelligence Specialization *Waterloo, Canada*

- Academic standing: Term Distinction for all terms (GPA: 3.9)
- Relevant courses: Data Structures, Algorithms, User Interfaces, Databases, Operating Systems, OOP Design