

# Shi Qi

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## EDUCATION

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### University of Waterloo

August 2022 — May 2027

*Computer Engineering, Undergraduate*

*Waterloo, ON, Canada*

- Cumulative GPA: 92.87/100
- Relevant Coursework: Computer Architecture, Computer Networks, Compilers, Digital Hardware Systems, Real-Time Operating Systems, Analog Control Systems, System Programming and Concurrency, Embedded Microprocessor Systems, Distributed Computing

## WORK EXPERIENCE

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### Faire

January 2026 — April 2026

Software Developer Intern

*Waterloo, ON*

- Led end-to-end development and experimentation of the cart page, driving ~\$4M in incremental **Gross Merchandise Value** through data-informed iteration and A/B testing
- Designed and implemented a **multi-resource infinite scroll** on the brand page using **Server Driven UI**
- Built an internal **file-level dependency analyzer** with cycle detection and resolution, enabling safe package migrations and eliminating circular dependencies

### Tangam

January 2025 — April 2025

Software Developer Intern

*Waterloo, ON*

- Maintained and modernized an **Angular/ASP** application, migrating legacy **ASPX** pages
- Built a fully tested type-safe HTTP state tracker in **TypeScript**, handling re-fetching, race conditions, derived state, and automatic **RxJS** observable cleanup
- Developed concurrent backend features using read-write locks to safely orchestrate parallel computations

### Burkett Statistical Consulting

May 2024 — August 2024

Software Developer Intern

*Remote - Ottawa, ON*

- Optimized schedule generation using **Simulated Annealing**, improving performance metrics by **20%** through search-space reduction, improved neighbor selection, and cost function tuning
- Built a **GitHub Actions CI** pipeline for automated optimizer benchmarking
- Trained machine learning models in **R** for forecasting and classification, outperforming baseline models

### Friendlier

September 2023 — December 2023

Automation Engineer Intern

*Guelph, ON*

- Designed an automated intake conveyor system using a **Raspberry Pi**, barcode scanner, servo motors, and conveyor belts
- Built a functional prototype that replaced manual sorting and increased throughput from **300** to **750** units per hour
- Automated operation logging and data collection, report generation and visualizations using **Google Scripts**

## PROJECTS

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### [Chirp](#) 🌐

2024

TypeScript, React, Next.js, Drizzle, PostgreSQL, NextAuth

[shiqui/chirp](#) 🌐

- Built an emoji-only social platform using **Next.js**
- Implemented type-safe server-side mutations and queries with **Drizzle** and **PostgreSQL**

[More projects on my home page](#) 🌐

## UNDERGRADUATE RESEARCH

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### Configurable FPGA Transistor Resizing

November 2025 — Present

*University of Waterloo*

- Developing an architecturally flexible FPGA transistor sizing framework to optimize transistor dimensions across FPGA tiles while balancing area, delay, and power trade-offs