

Richard Wu

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SKILLS

PROGRAMMING

Languages:

Python • **C++** • Go • Ruby • C • SQL
• Bash • R • JavaScript • HTML/CSS

Frameworks and technologies:

Rails • **GNU/Linux** • Redis • Node.js
• ProtoBuffers • NGINX

Tools:

Vim • tmux • Git

EDUCATION

UNIVERSITY OF WATERLOO

BCS IN HONOURS COMPUTER
SCIENCE

Expected May 2020 | Waterloo, ON
mGPA: 93%

- President's Scholarship of Distinction
- Software Engineering Entrance Scholarship
- Joe C. Lee Math Entrepreneurial Scholarship
- Dean's Honour List

COURSEWORK

ONLINE

Data Structures and Algorithms
(Coursera)

Machine Learning (Coursera)

DISTINCTIONS

- Top 125/6000 - Canadian Open Mathematics Challenge
- 6th/6000 - Canadian Senior Mathematics Contest
- Top 20 Finalist - Ontario Chemistry Olympiad

EXPERIENCE

| SOFTWARE ENGINEERING INTERN

January 2017 - April 2017 | Mountain View, CA

Infrastructure on the Borg team working primarily in **C++**, **Go**, and **Python**.

- Took initiative to port, optimize, and extend scheduling simulator from R to Go, reducing run times **from 7 hours to 7 minutes**
- **Drafted white paper** and conducted internal presentation on the impact of NUMA-scheduling on production workloads

| DEVELOPER INTERN

May 2016 - August 2016 | Ottawa, ON

Backend work on the internal shipping provider API in **Ruby**. Full-stack work on the core Shopify platform in **Rails**.

- Introduced a **formalized ETL framework** with smaller, testable modules for polling tracking data from shipping carriers
- Implemented USPS tracking information polling within the ETL framework using parallelized background jobs, decreasing upper bound of real-time tracking updates **from a few hours to 15 minutes**
- Integrated shipment options into our shipping microservice API using a **Log4j-like design pattern**, enabling **300k+ merchants** to purchase add-ons for their shipping labels

PROJECTS

STUDBUDS.COM | CO-FOUNDER + LEAD DEVELOPER

June 2015 - January 2017

University of Waterloo peer tutoring platform with 200+ registered students. Built with **Rails** and **Redis**.

- Wrote the entire web application (frontend and backend) in **Rails**
- Implemented a **background payment pipeline** with the Stripe API, enabling automatic P2P payment authorization, captures, and refunds
- Integrated live chat and notifications over **WebSockets** that hook into user events

NEWS_SCRAPER | RUBY GEM

August 2016 - October 2016

ETL web scraper that aggregates news articles. Written in **Ruby**.

- Implemented a **configuration-first architecture** that scales to scrape news articles from multiple sources
- Devised a **command-line interface** to simplify the process of supporting additional news sites

ANONYMEYES.COM | WINNER AT HACK THE NORTH 2015

September 2015

Public video feed where users can anonymously post videos that are instantaneously uploaded and backed up. Built with **Rails**.

- Implemented **Rails server** that pushes live video feeds to the client