

# MELODY LI

## CONTACT

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## EDUCATION

### University of Waterloo

Candidate for Bachelor of  
Computer Science  
2017–2021

## ACTIVITIES

### Enghack

2018

- Designed security drone prototype that provides real-time updates
- Won top 15 teams award

### Waterloo Engineering Ambassador

2017-2018

- Represented the University of Waterloo at two open houses
- Led five high school students on shadow days
- Guided tours for interested parents and students

### UW Sailbot Team

2018

- Built an autonomous sailboat in the mechanical subteam
- Awarded 4th place at the International Robotic Sailing Regatta

## COURSEWORK

- Data Structures and Algorithms
- Object-Oriented Programming
- Computer Organization and Design (Architecture)
- Logic and Computation

## SUMMARY OF SKILLS

**Languages :** Python, C++, JavaScript, Go, Bash, SQL, HTML/CSS

**Frameworks:** Node.js, Nightmare.js, jQuery, Backbone.js, Flask, pandas

**Tools:** Git, Linux, Bazel, Eclipse, Visual Studio, AutoCAD, SolidWorks

## WORK EXPERIENCE

### Google

#### Engineering Practicum Intern

May 2019 - August 2019

Interned on Ads Integrity, which scans ads for malware and fights malicious advertisers.

- Designed and automated weekly vendor release process to reduce malvertising escalations using Python, C++ and Go, saving engineers 2 hours of time a week
- Configured 5 new types of querying for retrieval from ad database to allow historical versioning verification and to provide a revert mechanism
- Implemented script generation in Python and SQL to read and write to SSOT database with intent of organizing advertiser serving versions and facilitating cross-team referencing

### Hubdoc by Xero

#### Software Developer Intern

January 2019 - April 2019

Automated document fetching from various online services for accountants and bookkeepers.

- Redesigned and reconstructed major financial service scraper using HTTP requests, collecting 6000+ documents for 5000 daily clients with 85% success rate
- Increased document fetch rate by 300% for 6 services with ZIP file processing in Node.js, jQuery, and Nightmare.js
- Used Backbone.js, Handlebars.js, and PostgreSQL to create database logging system and track service scheduling for company intranet

### Primate Labs Inc.

#### Hardware Analyst Intern

May 2018 - August 2018

Worked on Geekbench, a cross-platform processor benchmarking software.

- Implemented Gaussian blur compute benchmark workload using Vulkan API in C++, SPIR-V and OpenGL Shading Language
- Cataloged software issues and over 1000 processor details in database
- Tested 20+ versions of software and developed 7 new test cases

## PROJECTS

### Biquadris - C++

- Collaborated with 2 others students to design multiplayer Tetris game with 5 distinct levels
- Incorporated smart pointers, design patterns, and object-oriented programming

### Computer vision image processing tool - JavaScript, HTML

- Implemented 5 convolution algorithms to recreate popular filters and manipulate images, including blurs, grayscale, and edge detection
- Designed algorithm to simulate a scanner to assist with submitting school assignments electronically