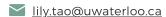
# **Lily Tao**

## 2B SYSTEMS DESIGN ENGINEERING

#### CONTACT





in <u>linkedin.com/in/lily-tao/</u>

github.com/lilytao2001

## **SKILLS**

#### Languages

- C++
- Golang
- Java
- JavaScript
- HTML/CSS
- MATLAB
- SQL

#### **Technologies**

- Firebase
- MongoDB/Mongoose
- ReactJS/Redux
- React Native
- NodeJS
- ExpressJS
- Git
- Docker
- Kubernetes/K9s
- Google Could Platform
- Spring Boot
- Terraform
- Grafana

## **EDUCATION**

## **University of Waterloo**

BASc. Systems Design Engineering (2019-2024)

- CGPA: 3.8
- Data Structs. & Algorithms (C++)
- Digital Computation (C++)
- Digital Systems
   (microprocessors, circuits)
- Engineering Prototyping

#### **INTERESTS**

Art (Oil, Acrylic, Portraits, Calligraphy)
Film Photography

### **EXPERIENCE**

## **Backend Developer**

Ecobee (May. 2021 - Aug. 2021)

- Implemented a device agnostic **gRPC Golang** microservice to read from Google Spanner database that ensures a **98%+ match rate** with legacy database and less than 300ms of latency, deployed to **2.7 Million** Ecobee devices
- Designed and implemented an ingestor service to persist device data from PubSub to Google Spanner using Golang, **OpenAPI**, and deployed on **GCP Cloudrun**
- Authored and presented an RFC document communicating the technical specifications of migrating thermostat data models to a team of 15 engineers
- Owned the migration of thermostat data models from xml to protobuf, reducing bandwidth usage by 50% during publishing
- Guaranteed code maintability and robustness by achieving 100% test coverage in unit and integration tests

## **Software Developer/Product Manager**

Year Zero Studios (Sept. 2020 - Dec. 2020) 👄

Mental Health Score 👄

- Used **ReactJS**, **Firebase**, **Express**, and **Vercel** as a lead developer to design, develop, and deploy a mental health scoring assessment from scratch
- Led **product development** and UIUX design by facilitating weekly design sprints, amassing **1000+ unique users** since Nov. 2020 public release

## Wellify 👄

 Connected ReactJS frontend to Firebase backend using Firebase API, allowing Wellify instructors to create new classes, edit existing classes, and access student information

## **Developer**

TD Bank (Jan. 2020 - Apr. 2020)

- Modernized legacy code in Java for financial reporting applications to audit internal software access
- Automated file transfer processes from external databases by creating scripts, reducing processing times by 70%
- Wrote Talend ETL jobs to load and extract financial data from Hadoop datastore

## **PROJECTS**

## **DiscoBee**

ReactJS, Socket.io, MQTT, Android SDK, NodeJS (2021)

• Prototyped an IoT disco light that reacts to sound waves and integrates with emulated Ecobee products.

#### My Film Journal

ReactJS, MongoDB, Express, NodeJS (2020-2021)

• Full stack application that allows film photographers to keep track of their photography settings sorted by film roll instead of using a physical journal

#### Trash Sorter (=)

ReactJS, Azure Custom Vision, HTML (Hack the North 2021)

 Trained and deployed a computer vision model and implemented Microsoft's Prediction API to classify images of waste uploaded by users

#### Herolines (=)

ReactJS, Firebase, Node (uOttaHack 2021)

 Application that allows healthcare workers to search for deals and benefits based on location and category using Google Map API and Google Place API