

# Tony Li

tonylizj.com  
github.com/tonylizj

tonyli8101@gmail.com  
tony.li1@uwaterloo.ca  
(+1) 647 527 5678

## EDUCATION

---

### University of Waterloo

September 2019 - Present

Candidate for Bachelors in Computer Science, Co-op

Cumulative GPA: 86.3%

Relevant Courses: Object-Oriented Programming, Data Structures and Algorithms, Combinatorics

## TECHNICAL SKILLS

---

**Languages:** TypeScript/JavaScript, C++, Python, HTML/CSS, Java, R  
**Frameworks:** Node.js, React, React Native, Express, Next.js, Recoil.js, Mongoose, TensorFlow  
**Technologies:** MongoDB, Git, Stripe, Jupyter, Linux, Google Cloud, Heroku

## WORK EXPERIENCE

---

### Software Developer (Full Stack) | Honeybee Hub

Co-op: May – August 2021

*Node.js, Express, MongoDB, React, Next.js, Stripe, Recoil.js, Material UI*

- Developed features for the Honeybee Hub web application and backend, a platform for connecting academic researchers to potential study participants in the general public.
- Led the implementation of a subscription-based pricing model for researchers across both the front and backend that interfaces with the Stripe API to efficiently track individual customer statuses.
- Built a dashboard for researchers to add or modify subscriptions with React and TypeScript.
- Constructed features for the prescreening survey system, including pages for viewing surveys and responses as well as support for question branching logic.
- Redesigned and created new landing and search pages with Next.js and Material UI.
- Developed various endpoints using Node.js and Express to interact with a MongoDB database.
- Collaborated with other developers to take on and split sprint tasks in an Agile workflow.

## PROJECTS

---

### highlighter | Full stack application + Discord bot that syntax highlights code

*Node.js, Express, Axios, React, TypeScript, Bootstrap, Formik, Postman*

tonylizj.com/hl

- Created a REST API with TypeScript in Node.js to syntax highlight code of over 30 languages.
- Utilized Express to handle request routing and Prism.js to tokenize input code.
- Built a Discord bot in Node.js with Discord.js which sends requests to the API with Axios.
- Implemented Discord commands that allow users to syntax highlight code in chat with any specified language, returning the result with less than 5 seconds of latency.
- Created a React frontend with Formik and Bootstrap to interface with the API in a browser.

### FlowerID | Android app that identifies flowers using a convolutional neural network

*React Native, Tensorflow, Keras, TypeScript, Python, Jupyter Notebook*

tonylizj.com/flower

- Built a sequential convolutional neural network model with TensorFlow and Keras.
- Optimized the model with assistance of visualization with Matplotlib and features inspired by VGG-16, reaching a validation accuracy of over 80%.
- Created an Android app using React Native and TensorFlow.js with Expo components to run predictions with the user's camera.
- Utilized weight quantization to reduce model size by a factor of 4 to minimize bundle size.
- Deployed the app to the Play Store at [play.google.com/store/apps/details?id=com.flowerid](https://play.google.com/store/apps/details?id=com.flowerid).