

# Nigel Huang

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## Education

### Ryerson University

Toronto, Ontario

BACHELOR OF ENGINEERING IN COMPUTER ENGINEERING (SOFTWARE ENGINEERING OPTION) (4.14 / 4.33 CGPA)

Expected May 2022

- **Relevant Courses:** Data Structures and Algorithms, Database Systems, Microprocessor Systems, Object Oriented Design, Digital Systems

## Skills

### Programming Languages

JavaScript, C++, C, Java, Python, SQL, VHDL

### Databases & Libraries

Apache Cassandra, Redis, MS SQL, Firebase, React, Express

### Tools & Platforms

Git, Docker, Node.js, Google Cloud Platform, DigitalOcean

## Work Experience

### Royal Bank of Canada

Toronto, Ontario

QUALITY ENGINEER INTERN, DATA CENTRE INFRASTRUCTURE & STRATEGY

May 2020 – Aug. 2020

- Reduced the time spent on manual QA regression testing for Angular applications by 83% through implementation of an automated testing suite in JavaScript and Jasmine Test Framework.
- Decreased the turnaround time for system upgrades from 1 week to 2 days through an initiative to automate work and improve processes.
- Collaborated with an Agile team of 6 through daily stand-ups, sprints, and requirement gathering with product owners and software developers.

### Loadlink Technologies

Mississauga, Ontario

SOFTWARE DEVELOPER INTERN, OPERATIONS

May 2019 – Aug. 2019

- Architected and implemented a REST API for integration between Salesforce and MS SQL which reduced customer wait times by 5 minutes.
- Developed and deployed Salesforce applications (JavaScript) to be used by 20 customer service representatives which improved their workflow efficiency, allowed better insight into the team's productivity, and ultimately reduced the average ticket backlog by 12%.
- Orchestrated the process of subscribing, upgrading, and removing customer subscriptions using Salesforce process builder, triggers, and scheduled jobs to eliminate mistakes and save time.

## Projects

### Ocurl Link Tool (<https://ocurl.io>)

NODE.JS | EXPRESS | APACHE CASSANDRA | REDIS | DOCKER

- Created a free REST API for getting and decoding shortened URLs. 10+ daily active users. Also available as Discord Bot and Chrome Extension.
- Built and deployed overall service architecture with a focus on scalability using Docker, DigitalOcean, Compute Engine, and Stackdriver.

### ESP32 HomeKit Compatible LED Controller

ESP32 MICROCONTROLLER | C | FREERTOS | HOMEBRIDGE

- Utilized the ESP32 microcontroller to convert a device to be HomeKit compatible using the HomeBridge emulator API. Interfaced communications between the controller and base station by developing a RESTful API server, and using the ESP32 WiFi module.
- Learned real time operating system programming concepts such as tasks, events groups, and semaphores using FreeRTOS in C.

### Mental Health Chatbot Messaging Server - UofT Hacks 2019

PYTHON | FLASK | WEBSOCKET PROTOCOL | FIREBASE

- Collaborated in a team of 4 to prototype and present a full stack application for mental health support and advocacy. Bot performed sentiment analysis using data from 100+ threads and 400+ comments scraped off of Reddit.com using the Python Reddit API Wrapper.

### Weather Forecasting Model

PYTHON | PANDAS | SCIKIT-LEARN | SEABORN | FB PROPHET

- Cleaned up, visualized, and transformed a time series dataset in Python, Pandas, and seaborn.
- Trained a model with data from Kaggle yielding a 78% accuracy using Facebook Prophet, and published a tutorial on GitHub.

## Leadership and Volunteering

### Ryerson Artificial Intelligence

WEB DEVELOPER (<https://ryersonai.ca>)

Sep. 2019 – Present

- Full stack developer responsible for the end-to-end development and deployment of the team's website using React and Netlify.

### Open Source Community

CONTRIBUTOR | NETLIFY CMS | MATERIAL UI

Mar. 2018 – Present

- Collaborated with maintainers and community to develop new features. Accepted pull requests to Netlify CMS, Material UI.