

# Joshua Lee

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## Education

### University of Waterloo

Candidate for B.A.Sc. Computer Engineering

Waterloo, ON

Sep. 2019 - May 2024

## Skills

**Languages** Python, Java, JavaScript, C++

**Technologies** Node.js, React, Firebase, Git, PostgreSQL, Linux, Dialogflow, Selenium, GraphQL, Django

## Experience

### Airmatrix

Software Engineer

Toronto, ON

Aug. 2020 - Dec. 2020

- Planned and built emergency routing failsafe procedure for drones in flight according to safety regulations, and deployed feature to production level through C++ backend
- Spearheaded major overhauls to React front-end web app, utilizing tools such as DeckGL and Three.js to intuitively display drone positions and telemetry data within 3D space
- Developed REST APIs through NodeJS, Express, and Django to allow communication between the user interface, drone communication service, and pathfinding engine
- Orchestrated and deployed a GraphQL database through Dgraph for use by in-house drone pathfinding algorithms

### DigitalEd

Site Reliability Engineer

Waterloo, ON

Jan. 2020 - Apr. 2020

- Developed an interactive Slack bot using Node.js, Google Cloud Functions, and DialogFlow allowing Development, Sales, and Customer support teams to query customer data from Firestore databases
- Reduced the number of Rundeck automation job failures by 95% by identifying and correcting silent errors
- Developed tooling and implemented features for a Vue.js web interface used by customer support and development teams to streamline the investigation of customer and internal issues

## Projects

### Explore | React Native

- Developed a React Native mobile app to crowd source itineraries allowing users to access and contribute to a catalogue of plans, giving opportunities to the same experiences a local could have
- Implemented a material design UI, and integrated a Google Firebase backend for authentication and storing user data

### Course Buddy | Javascript

- Designed an application utilizing Puppeteer and Node.js to scrape and navigate through university course portals and enroll in desired courses
- Inspired by sad friends who didn't get the courses they wanted, and up to this point has helped 3 friends register for their desired classes

### Fruit Tycoon | Python

- Designed and developed a web-based progressive fruit farming idle game in Python using the simplegui module
- Integrated handmade sprites and animations alongside a custom physics engine to handle moving entities

### Minecraftsweeper | Java

- Clone of the original Windows Minesweeper created in Java by utilizing OOP methodologies and Java Swing, skinned with a custom Minecraft GUI