

# Jason Hu

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in [/hujason1](#)  
🌐 [/HulsJason](#)  
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## 🎓 Education

### University of Toronto

Candidate, Honours Bachelor of Science

➤ Specializing in the **Entrepreneurship Stream** of **Computer Science Co-op** major

Sep 2018 – Present

Toronto, ON, Canada

## 🔧 Experience

### BlackBerry

#### Software Developer Intern

May 2021 – Aug 2021

Waterloo, ON, Canada

- Developing features in a **Node.js-Redis** backend service through **test-driven development** with **Mocha unit testing** to mock external services, and **Pact contract testing** to establish service compatibility/interfaces
- Creating a class to handle connection, REST API queries, and live **Kafka updates** to/from an external service, by applying the **Pub/Sub** pattern to update a **Redis cache** on run-time
- Implementing **database synchronization** to synchronize Redis cache across service instances, with a **delta calculator algorithm** to calculate database differences, update cache accordingly, and re-query data if stale
- Writing a periodically-run **Lua script** for Redis cache **database housekeeping**

### OpenText

#### Software Developer Intern

Jan 2020 – Aug 2020

Richmond Hill, ON, Canada

- Created a document management application to demonstrate OpenText's cloud content management APIs and services, using **React**, **TypeScript**, **Redux**, **Material-UI**, and **React Router**
- Created a **Python Tornado** dashboard to display unit test results, using **D3.js** and **Bootstrap**
- Configured automated testing **Python script** to leverage Windows VMs, using **PowerShell** and **Paramiko SSH**

## ⚙️ Skills

**Languages** JavaScript, TypeScript, Java, Python, HTML, CSS, C

**Libraries/frameworks** React, Express, Redux, Spring Boot, Mocha, Pact

**Tools/technologies** Node.js, Git, MongoDB, Redis, Neo4j

**Methodologies** REST APIs, microservices, NoSQL, Agile Scrum, unit testing, test-driven development

## 🏠 Projects

### Real Estate Agent CRM – CRM web app

- A customer relationship management web app for real estate agents to manage multiple clients' properties and profiles, built with **React**, **TypeScript**, **Node.js**, **Express**, and **MongoDB**
- Implemented full stack authentication flow from **React** login/signup pages to backend authentication, using **bcrypt**, **express-session**, **Mongoose**, and **Express middleware**
- Designed state management for session data and authorization, using **React Context API** and **TypeScript**

### Planit – Trip advisor mobile app

- A full stack mobile app that generates vacation itineraries, built with **React Native**, **Redux**, **Java Spring Boot**, **MongoDB**, and **Google Maps API**
- Implemented itinerary manipulation such as adding and deleting events from the itinerary while re-scheduling existing ones, as one of the app's main features

### Spotify-lite – Backend microservices

- A backend for a music player service composed of two **REST API microservices**, built with **Java Spring Boot**
- Stored user info in a **MongoDB collection** and playlists in a **Neo4j graph** respectively
- Wrote **Cypher graph queries** for nodes up to three relationship depths away