Jason Hu

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🎓 Education

University of Toronto   Sep 2018 – present (expected Dec 2022)
Candidate, Honours Bachelor of Science   *Toronto, ON, Canada*
> Specializing in the **Entrepreneurship Stream** of **Computer Science Co-op major**

⚙ Skills

Languages   JavaScript, TypeScript, Java, Python, HTML, CSS, SQL, C, Lua
Libraries/frameworks   Node.js, React, Express, Redux, Spring Boot, Mocha, Pact
Technologies/databases   Git, MongoDB, Redis, Kafka, Neo4j, GitHub, GitLab, Jira
Methodologies   REST APIs, NoSQL, unit testing, integration testing, contract testing, Pub/Sub, TDD

🍰 Experience

BlackBerry   May 2021 – Aug 2021
Software Developer Intern   *Waterloo, ON, Canada*
> Developed features in a **Node.js-Redis backend service** through **test-driven development** with **Mocha unit testing**, **integration testing**, and **Pact contract testing** to establish service compatibility and interfaces
> Implemented data synchronization to **synchronize a Redis cache across service instances**, with a **delta calculator algorithm** to calculate database differences, delete stale records, and re-query data if necessary
> Wrote and optimized a **Redis database housekeeping Lua script** to scan for, daily, and **delete up to 100 stale records in <1.5s**, through a **non-blocking cursor recursion algorithm**, measured with **Prometheus metrics**
> Applied **Redis Pub/Sub** to publish, listen for, and respond to events to update a Redis cache in run-time
> Created a class to manage connection, REST API queries, and live **Kafka events** from another service

OpenText   Jan 2020 – Aug 2020
Software Developer Intern   *Richmond Hill, ON, Canada*
> **Reduced test pipeline results lookup time by >90%** by creating a **Python Tornado** dashboard to **display Jenkins unit tests results**, using **D3.js charts** and **Bootstrap** to categorize test results with tables and charts
> Created a document management web app to **demonstrate OpenText's OT2 cloud content management APIs and services**, using **React**, **TypeScript**, and **Material-UI**
> Configured **automated testing Python script** to leverage Windows VMs, using **PowerShell** and **Paramiko SSH**

⚗ Projects

Real Estate Agent CRM – CRM web app   *React, TypeScript, Node.js, Express, MongoDB*
> A customer relationship management web app for real estate agents to **manage multiple clients' properties and profiles**, built with **React**, **TypeScript**, **Node.js**, **Express**, **MongoDB**, and **Material-UI**
> Implemented full stack **authentication flow** from **React** login/signup pages to backend authentication, using **bcrypt**, **express-session**, **Mongoose**, and **Express middleware**

Planit – Trip advisor mobile app   *React Native, Redux, Java Spring Boot, MongoDB*
> A full stack, trip advisor mobile app that **generates recommended vacation itineraries** based on user preferences, 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   *Java Spring Boot, MongoDB, Neo4j*
> 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