Jack Hu

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/jh242

Skills

Languages: Java, Python, C/C++, JavaScript/TypeScript, JSON, HTML, CSS, SQL
Technologies: Git, Node, REST, React, Redux, React Native, Electron, Firebase, MongoDB, Express, Heroku

Experience

Full-stack Developer @ D2L — Toronto, ON | *May 2020 – Aug 2020*

In collaboration with UWaterloo Ideas Clinic

- Developed a full-stack web application following the **MVC** pattern using **Mongo**, **Express** and **React/Redux**
- Envisioned and implemented a clean, responsive UI/UX favored by the team among 4 different designs
- Automated **continuous integration** and **delivery** with Github Actions and Heroku
- Balanced server load with **PM2** clustering, reducing request times by an average of 15%

Junior Software Engineer @ Pin'd Inc. — Toronto, ON | *Jul 2019 – Nov 2019*

- Developed cross-platform social media app using **React Native** and **Firebase**
- Created all database schemas, including venues, users and events
- Designed data ingest tool using **HTML/Javascript**, deployed with **Firebase**
- Implemented cloud functions for database normalization using **TypeScript** and **Python**
- Migrated data from Cloud Firestore to **MongoDB** in order to reduce costs by 10-20% depending on user count

Education

Candidate for Bachelor of Software Engineering (BSE)

University of Waterloo – 3.9 GPA — 2019-2024 (Anticipated)

Projects

SpaceX Story — *Mar 2020*

- Created a web app using **React.js** to display SpaceX launch and landing info
- Implemented **Redux** to manage app-wide state, fetching data from open-source **REST** API

Flex Smart Mirror — *Oct 2019 – Dec 2019*

- Implemented a standalone widget-based interface for a Smart Mirror using **React** and **Electron**
- Created an **OpenCV**-based facial recognition system to authenticate the owner
- Utilized the **IBM Watson API** to implement voice assistant with a trigger word (think "Okay, Google!")

Schola — *Oct 2019*

YHack project, a hardware-software combo that automagically streams lectures to a proprietary web portal.

- Created web portal for hosting a livestream with **React.js**, with authentication handled by **Firebase**
- Developed motion-tracking camera setup using **OpenCV** and an **Arduino**, allowing the professor to be kept in-frame

Certifications

- Big Data and Machine Learning Fundamentals (Google Cloud Platform Certified)