

Jack Hu

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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 for learning management to be used by ~10 million or more students
- Implemented the MVC pattern with a RESTful backend 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

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 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

Education

Candidate for Bachelor of Software Engineering (BSE)

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

Certifications

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