# ALEX SHI

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## SKILLS

### Languages
JavaScript • Python • Java
C++ • TypeScript • Kotlin
HTML • CSS • SQL

### Technologies
React • Redux • Flask
Node • Airflow • Spring

### Essential Tools
Git • Docker • Redis
Linux • Postgres • Mongo

## AWARDS

### Hack the North 🔗
1st place out of 250+ teams

### Canadian Computing Competition Senior
Placed 50th out of 2000+ contestants (2018)

### PennApps XX 🔗
Top 30 out of 200+ teams

## EDUCATION

### University of Waterloo
2018 - 2023

Candidate for Bachelor's of Computer Science

Intended minor in economics

### Academic Interests
Distributed Systems and HPC
Functional Programming
WebAssembly and WebGL
Gamification and UI Animations

## EXPERIENCE

### Snaptravel  //  Software Engineer Intern
📅 January 2020  -  April 2020

- Built **Flask microservices** responsible for ppc bidding, **impacting ad placement at scale** and top of funnel marketing
- Worked closely with UX designers to create **React** views and components in **TypeScript** for a product deployed across **Snaptravel's 2+ million users**
- Created **Braintree** integrations in **Python** that have processed **5000+** payment disputes to date, minimizing chargeback fraud and abuse
- Developed UI experimentation framework with **Node.js**, allowing UI variants to be tested and invoked in real time
- Engineered and maintained several **ETL pipelines** with **Airbnb Airflow**

### Deloitte  //  Fullstack Developer Intern
📅 May 2019  -  August 2019

- Built **Java** RESTful web services with **Spring Framework**, Hibernate, and H2 database
- Designed and constructed transaction monitoring dashboards with **React - Redux**
- Developed enterprise blockchain applications in **Kotlin** with **R3 Corda** Hyperledger
- Spearheaded development of **security** features such as live anomaly detection, **usage monitoring**, and error tracking

### WATonomous  //  Software Engineer
📅 December 2018  -  April 2019

- Worked in a student design team aimed at developing a **level 4 autonomous vehicle**
- Refined heuristics for **A\* pathfinding algorithm in C++**, boosting estimation accuracy
- Delivered an **OpenGL** vehicle simulation devtool for costmap model parameter tuning

## PROJECTS

### Tinyshed  //  Airbnb for Storage
- Created **React Native** mobile app for users to rent out their free space similar to Airbnb
- Built explore view capable of surfacing thousands of listings with **AWS CloudFront** & **S3**
- Implemented **JWT user authentication** flow with locally encrypted key-value storage
- Utilized **Redis** geospatial indexing for quicker location and distance polling at scale

### J2CSV  //  Dataset Explorer 🔗
- Leveraged **Lodash** to extract and load tabular data from online JSON datasets to CSV
- Built an interactive SQL editor with **sql.js**, enabling users to query and transform data