JIMMY QI

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SKILLS

Languages: Java, C++, C, Python, JavaScript, Scheme, SQL, R, CSS
Others: NodeJS, ReactJS, PostgreSQL, Backbone, Handlebar, NightmareJS, Scikit-Learn

EDUCATION

University of Waterloo | Candidate for Double Major in Computer Science, Pure Math, 2022

- **Achievements**: Dean's Honours List, Mathematics Scholarship, President's Scholarship
- **Related Courses**: OOP, Data Structures, OS, Concurrency, Algorithms, Optimization, Public Speaking

WORK EXPERIENCE

Waterloo BBCR Lab| Research Assistant *Jan 2021 – Apr 2021*

- Implemented multiple cutting-edge cryptographic algorithms in Java including homomorphic encryption and signature algorithms
- Deployed cryptographic blockchain smart contracts on the Hyperledger Fabric for researching network security

Tamr | Software Engineer *Jan 2020 – Aug 2020*

- Improved the accuracy of type-checking system of a SQL-like language by redesigning the type hierarchy of nested types
- Reduced common upgrade failures by designing and developing the Maintenance Framework which provides a platform and multiple interfaces to run Maintenance Scripts that improve the health of the system
- Investigated the needs of Tamr users and field engineers and built a garbage collection Maintenance Script that cleans incompletely deleted Projects whose dangling references led to numerous blocker tickets
- Helped users transition through backward-incompatible upgrades by running Maintenance Scripts in the upgrade process. This type of change was a lot harder to make before due to the lack of confidence in correctness.

PROJECTS

Mappify | Javascript *Jul 2019*

- Massively reduced the complexity of applying to hackathons on MLH.io by adapting the UI to integrate a map marked with hackathon locations. Packaged as a Chrome extension.
- Eliminated the need to toggle between MLH and google maps, along with the necessity to learn US geography

EtherRide | Javascript, Node, Solidity *Jan 2019*

- Provided legal reliability in human-computer interactions by constructing an autonomous "Uber" using blockchain, winning best blockchain hack at HackUofT 6.
- Adopted Node to link frontend React to sponsor's SmartCar API to securely control vehicles once smart contract executes

Vim | C++ *Dec 2018*

- Implemented a clone of Vim, the terminal text editor, with over 50 commands, following OOP principles and utilizing various design patterns
- Followed MVC framework so the keyboard input (Control) can easily be replaced by another input method, similarly, the CLI (View) can also be swapped without changing the core logic
- Worked effectively with a partner: discussed implementations, wrote a design document, and divided tasks

INTERESTS

- I enjoy working out, playing ball, swimming, bouldering and snowboarding
- I am religious when it comes to food and cooking, I try to discover new restaurants / dishes every week