

Qi Shu

4B Honours Computer Science and Business Administration Double Degree

Expected Graduation Date: April 2021

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Skills

- Languages: C++/C, TypeScript, JavaScript, JSX, HTML, CSS, Python, Java, Scheme, Bash, SQL, VBA
- Library/Framework: React, Node.js, jQuery, d3.js, WebGL, Three.js, NumPy
- Tools: Git, Linux/Unix, Xcode, Vim, LaTeX, MacOS, Android, iOS

Work Experience

Front-End Engineering Intern

Jan 2019 – Present

Imply Data

San Francisco Bay Area, CA

- Developed highly abstract and extensible React components with Blueprint.js from scratch for Apache Druid web console by reimplementing old console elements, extending new features and enhancing the UI
- Integrated UI components with backend API to present data and server configuration through HTTP requests
- Visualized responsive and interactive data representation of Druid server resource usage through d3.js
- Wrote Bash and Node.js scripts to automatically generate JSON objects for web services by parsing Markdown files, and thus eliminated the need of repeating code and increased codebase maintainability

Research Assistant – Compiler Construction

Aug 2018 – Dec 2018

UW Data System Lab

Waterloo, ON

- Compiled DBMS that has a simple extensible runtime and operates by translating SQL-like data manipulation requests directly to C code that interfaces with this runtime

Research Assistant – Web Application Development

May 2018 – Aug 2018

UW Human-Computer Interaction Lab

Waterloo, ON

- Built an online Crowd Working platform based on Node.js
- Parsed data with Python for analysis in NumPy to discover a more efficient online Crowd Working strategy which is mutually beneficial to both parties

Web Developer

Jan 2018 – Apr 2018

Ontario Investment Office

Toronto, ON

- Visualized relevant data on office website in an interactive way using d3.js and highchart.js libraries
- Created JavaScript widgets such as a responsive table of content for office website to improve its functionality and user experience
- Designed web-based graphics with WebGL and Three.js to enhance the user interface

Notable Projects

3D Interactive Earth

- Built a WebGL-based 3D Earth Model displaying Ontario's investment connections with the world
- Developed clickable CSS-based 2D location points to follow 3D Earth movement pattern, with 3D projectiles connecting points to showcase Ontario's investment relations with other countries.

Tetris Game

- Established the Tetris game with C++ as a class project and attained a score of 99.8%
- Adopted Observer, Model-View-Controller and Template Method Design Patterns

Sunburst Data Visualization

- Built a responsive sunburst chart based on d3.js, which extracts data from HTML tables

Awards

1st place in Women Empowerment Category in Equithon

May 2017

- Built website-based childcare service platform iCare, with HTML widget with input boxes which can display, store and process information

Education

University of Waterloo, Waterloo, ON, Canada

Sep 2016- Present

- Honours Computer Science and Business Administration Double Degree (Co-op), Minor: Statistics