

# ZIPING (HERRICK) LIU

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## SUMMARY OF QUALIFICATIONS

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- Strong passion with polished technical proficiencies in the field of software development
- Exceptional logical-thinking and problem-solving skills cultivated from completing challenging course projects
- Understand software development life cycle and agile methodology; Exceptional learning and research abilities
- Experienced in transforming business requirement into applications; Skilled in communicating technical concepts

## TECHNICAL PROFICIENCIES

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**Programming Languages:** JavaScript, TypeScript, Python, SQL, HTML, CSS&Sass, Git, C/C++, Linux Script, Scheme

**Operating Systems, IDE, & Other Applications:** Mac OS, Windows, Linux/Unix, PyCharm, VScode, Sublime, Postman

## EDUCATION

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**University of Waterloo, Waterloo, ON**

*Bachelor of Computer Science, Statistics Minor*

Jan. 2016 - Feb. 2020

- **Cumulative GPA:** 83.3/100
- **Awards:** **University of Waterloo Merit Scholarship** (Awarded for outstanding admission academic standing)
- **Relevant Courses:** Object-Oriented Software Development, Data Structures, Computer Networks, Operating Systems, Database Management, Artificial Intelligence, Machine Learning etc.

## RELEVANT PROJECTS

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**Cat Adoption Website**, Personal Project, Toronto, ON

May. 2021

- Translated designs & wireframes into high-quality code and wrote application interface code via Javascript following React.js workflows
- Participated in day-to-day meetings, status update, strong reporting and effective communication with UI/UX designer

**Burger Builder**, Personal Project, Toronto, ON

May. 2020

- Built a responsive website for ordering burger using React and Fairbase
- Utilized react-router and fairbase authentication to achieve page navigation and user login/logout
- Combined Jest test runner and Enzyme testing utilities to test the application after each patch
- Restructured code base from class-based component life cycles methods + redux to react hooks + context api to achieve better code reusability, understand and maintained straightforwardly

**Recipe Searching Website**, Personal Project, Toronto, ON

Apr. 2020

- Developed a recipe searching website using modern javascript, html5 and css3
- Applied MVC pattern to the application to meet a clear separation between each core module
- Integrated 3rd party Apis and npm modules to fetch relevant data, handling HTTP request and response
- Configured webpack and babel to bundle files and handle cross browser compatibility

**Go-Back-N (GBN) Protocol**, Computer Networks, University of Waterloo, Waterloo, ON

Jul. 2019

- Programmed a text-file transmitter in Python including sender and receiver modules
- Coded algorithms to effectively handle network errors such as packet loss and duplicated packets
- Fostered in-depth understanding in network architecture and protocols

**TSP Solver**, Introduction to Artificial Intelligence, University of Waterloo, Waterloo, ON

Nov. 2018

- Established two algorithms in Python to solve Traveling Salesman Problem (TSP) and benchmarked results
- Implemented heuristic and hill climbing optimization methodologies as the core designation detector
- Cultivated the ability to use machine learning concepts to make incremental changes to achieve optimized solution

**Board Game Development**, Object-Oriented Software Development , University of Waterloo, Waterloo, ON

Nov. 2017

- Implemented a grid-based board game with C++ under Linux environment in a team of two
- Designed additional features to increase product attractiveness by researching into industry best-practices
- Applied various design patterns including but not limited to Observer, Decorator, and Iterator Pattern
- Excellent written communication skills evidenced from documenting technical concepts to ensure code readability