

Raymond Li

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EDUCATION

- **University of Waterloo** Waterloo, ON, CA
Candidate for bachelor of computer science, currently 4A term *2016 - present*

WORK EXPERIENCE

- **Amazon** Toronto, CA
Software Development Engineer *September 2019 - December 2019*
 - **Developed Distributed Priority Queue:** Used Amazon Aurora MySQL compatible database and AWS service: CloudWatch, EC2 etc to build a distributed priority queue.
 - **Optimized Message Queue:** Doubled the transactions per second by using batch operation and parallel programming.
 - **Integrated to existing service:** By using Elastic load balancing, Kinesis to integrate the priority package with existing SCOT service.
- **Pointclickcare** Waterloo, CA
Software Engineer (Back-end) *Jan 2019 - April 2019*
 - **Building cloud platform:** Built and developed new features, fixed bugs, wrote unit tests for the cloud platform called CORE-WEB by using Java Spring-boot, docker, Jenkins, Kubernetes and MySQL.
 - **Developing Internal tools:** Implemented metrics and error logs for microservices by using DataDog
 - **Developed microservice:** Worked with team Pixels and developed new microservice called POSER, wrote stored procedures to add, update and delete data from sql database, wrote REST Apis to handle client requests
- **Encircle** Kitchener, CA
Software Developer *May 2018 - Aug 2018*
 - **Back-end:** Taking charge of user permission, managing database and fix logical errors by using Python, Django, PostgreSQL.
 - **Web developer:** Designed and implemented new features and modify original features for web pages by using react, Angular.
 - **Mobile Developer:** Applying new features to mobile applications of android and IOS, implementing auto-complete features of filter.
- **University of Waterloo** Waterloo, CA
Lake Modelling Programmer *Sept 2017 - Dec 2017*
 - **Climo:** A Python data analysis software translated from FORTRAN used to collect data from NASA and government websites and apply mathematical functions and models to predict future lake ice-thickness and temperature.
 - **GIS Image Generator:** By using Restful API and GIS package, collect GIS images from NASA server and generate predicted GIS image. Proficiently using R code and Matlab to perform data visualization and data analysis.

PROJECTS

- **homEMOstasis:** A Hackthon software developed in Python which uses facial recognition, speed-to-text, text-to-speech APIs provided by Azure Microsoft, to give in-time responses to users. When user change their facial expressions, this software would either tell the user a joke or use some words to calm them down in Donald Trump voice.
- **ReviewScraper:** It is a Google Chrome extension that help users to get similar products by other customer's reviews and give them some recommended products during their online shopping. This is a Hackthon project that uses web scraper to fetch reviews, price and product description and uses machine learning to determine whether a product is good or not by its reviews.
- **Sokoban:** A Java strategy game and uses OOP concept and designed patterns including MVC, Visitor Pattern, uses queue to manage simultaneous operations.

- **Proust:** It is a nano program provides elementary interactive assistance in the development of verified proofs for propositional and predict logic. It applies Martin-Lof type theory to practical, implements and develops some core elements in the full-featured proof assistance like Coq and Agda.
- **Sorcery:** It is a turn-based card game designed in C++ by using OpenGL and OOP approach. It is implemented with appropriate methods like inheritance, polymorphism and encapsulation.

PROGRAMMING SKILLS

- **Languages:** Python, C++, C, SQL, Java, R, Matlab, Coq, TypeScript, Racket
- **Tools/Frameworks :** Spring Boot, React, Apache, Docker, MySQL, Flask, Django, AWS, NoSQL Database, AWS