

Lichen Ma

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Education

University of Waterloo

Sept 2016 - May 2021

Candidate for Bachelor of Applied Science in Computer Engineering

- Top 25% of Computer Engineering Juniors

Experience

Back End Engineer *Intersect*

Sept - Dec 2019

Ruby, Rails, RSpec, Java, Spring, Git, JIRA

Toronto, ON

- Refactored entire application service layer implementing **template metaprogramming** and **singleton** design methods **reducing memory consumption by 40%**
- Optimized room booking workflow data structure and handled integrations with third-party **Nexodus** service

Full-Stack Developer *HubHead*

Jan - Apr 2019

Java, Spring, AngularJS, PostgreSQL, Groovy, Git, MVEL

Markham, ON

- Developed the full-stack implementation for a duplicate workflow detection service on a cloud based multi-user application, **eliminating back-end errors** resulting from user input overlap
- Designed a SQL optimization job using Obsidian Job Scheduler, periodically removing unused database entries and **reducing process list load times by 20%**

Wireless LAN Engineer *Extreme Networks*

Apr - Aug 2018

JavaScript, Postman, Newman, Bash, SwaggerIO

Markham, ON

- Automated REST API regression testing by creating Postman workflows to generate requests and JavaScript Assertions to perform validations, **shortening the verification process by 60%**
- Managed the verification process for all user profile API endpoints, **eliminating back-end vulnerabilities** resulting from improper server-side validations

Software Engineer *Toronto Water*

Sept - Dec 2017

Python, NumPy, pandas, Microsoft SQL Server

Toronto, ON

- Automated the generation of Asset data analytics using **Python** for data preprocessing and analysis, **shortening the asset report generation process by 80%**
- Developed a database of company assets using **Microsoft SQL Server**, streamlining the data retrieval process

Projects

Javalon - Spring Web Service Board Game

Java, Spring, AngularJS, H2, Websockets

- Developed a **real-time** web service interpretation of the card-based board game "The Resistance: Avalon"
- Designed the full-stack application implementation featuring user authentication, game-rooms, chat-rooms and real-time game synchronization across devices driven by **Websockets**

Interests

YMCA Youth Basketball Coach

Oct 2013 - June 2016

Skills

Technologies Rails, Spring, NodeJS, Express, AngularJS, React, Git
Languages Java, JavaScript, Ruby, C, C++, Python, SQL