

# Lichen Ma

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## Education

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**Candidate for Bachelor of Applied Science in Computer Engineering**  
University of Waterloo

Sept 2016 - May 2021

## Experience

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**Back End Engineer** *Intersect*

Sept - Dec 2019

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

Toronto, ON

- Optimized room booking workflow data structure to display crucial client data and populate internal **Nexodus** application for user account administration, adopted throughout the organization

**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
- Added client-side and server-side data validations for an Asset Management web service using **MVEL** and **SQL**, ensuring compliance with SAP masterdata standards
- 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 and maintained a database of company assets using **Microsoft SQL Server**, streamlining the data retrieval process and saving the server team 10 hours / week

## Projects

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**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

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**YMCA Youth Basketball Coach**

Oct 2013 - June 2016

## Skills

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**Technologies** / Spring, NodeJS, Express, AngularJS, React, Android Studio, Git

**Languages** / Java, JavaScript (ES6), C, C++, Python, SQL, Kotlin, HTML5, CSS3