

# Ian Li

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## Skills

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| <b>Programming Languages</b> | C, Sh/Bash, Python, Java, Javascript   |
| <b>Frameworks</b>            | MongoDB, Express, React, NodeJS, Sass, Axios, Apache, Foundation, Bootstrap, and WordPress   |
| <b>Tooling</b>               | Linux, Nix/NixOS, PCRE Regex/Sed, Git, SSH/Telnet, Valgrind, Netlify, Heroku, and PHPMyAdmin |
| <b>Certificates</b>          | Microsoft Azure AI-900, Cybersecurity Basics and Penetration test automation                 |

## Experiences

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### Principal Software Lead, *Rentura* 2021 – Current

- Lead the development of an **MVP webapp** using the **MERN** stack for furniture rental services
- Developed a **RESTful API** using **Express.js** with **CRUD** endpoints, and managed **MongoDB** instance and schemas
- Developed a mobile-first responsive **React.js** frontend using **Sass** and **Axios**

### Web Developer, *nvision* 2019

- Maintained **WordPress** sites using **LAMP** Stack, Developed themes and linked data from **MySQL** to WordPress
- Developed internal dashboards for employees using **MERN** stack and **Bootstrap**

### System Administrator, *Gang RP Network* 2017-2018

- Created custom game mods and 3D assets for game servers using Unity and Blender
- Maintained servers through Telnet, maintained internal management dashboards and image assets

### Software Developer, *FIRST Robotics Team 6866* 2018

- Developed software for a conveyor magazine system in Java using WPILib

## Projects

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### Experimental Interpreter 2020 – Current

A statically typed interpreted language with type inference, written from scratch in C

- Designed an LL(1) parser that parses abstract syntax trees, which are evaluated using a tree-walk evaluator
- Goal is to develop an easy-to-use general purpose programming language that is predictable, eventually with its own compiler and JIT based interpreter
- Developing activation records via parent-child trees and strong typing (Hindley-Milner type system) currently

### Shell Site Generator (shsg) 2020 – Current

A highly lightweight and portable static site generator that can be deployed on every UNIX-like environment

- Developing a static site generator written in pure POSIX-compatible shell and PCRE-compatible Regex
- Converts markdown files to themed html pages using only regex/sed
- Developing regex required to parse tables and lists, and removing dependency on PCRE (GNU coreutils) currently

## Education

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### University of Western Ontario

**Candidate for Bachelor of Science** – Honours Computer Science, Major in Mathematics — Anticipated in June 2024

**Relevant courses** – CS 2210A – Data Structures and Algorithms, Math 2155F – Mathematical Structures