Ren Jie Zheng

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SKILLS

Languages: C#, C++, C, Python, Java, JavaScript, TypeScript, HTML, CSS, SQL
Technologies: .NET, React, SQL Server, SQLite, MongoDB, Azure Cloud, Jira, Postman, Bash, Git

EMPLOYMENT

Software Developer Intern – *Thomson Reuters, Platform Core team* January – April 2024

- Contributed to new **feature development** for Thomson Reuter's **Legal Tracker** application
- Diagnosed and resolved a **PowerShell automation** issue by updating the apps **service bus framework (NServiceBus)** to support **authorized user impersonation**, enabling additional automation opportunities
- Updated the new user email service written in **C#** as part of a **CIAM** authentication migration, ensuring seamless integration with the new sign-up and login workflows
- Enhanced the user search module using **C#, .NET**, and **SQL** to support additional search fields, while identifying and resolving a legacy SQL issue and implementing **NUnit** tests to ensure code stability and prevent regressions
- Revamped legacy UI components and updated pages to meet **AODA** accessibility standards, leveraging **HTML, CSS**, and **Razor Pages** to improve usability for all users

Full Stack Web Software Developer – *BTNX Inc* May – August 2023

- Developed modules/tools using **React**, **.NET,** and **SQL** for the company's admin site, following the **MVC** design pattern and implementing a **component-based** architecture
- Spearheaded the development of a **new admin module** enabling the QA team to record and manage customer complaints across **900+ businesses**, streamlining the complaint handling workflow
- Continued development of a warehouse app using **Blazor, C#,** and **.NET,** completing and enhancing the product picking and order packaging processes
- Took the initiative to refactor legacy code for improved readability and adherence to **OOP** principles, while optimizing API endpoints to achieve up to **90% faster** response times

Junior Developer Intern – *Summitt Energy* June – August 2022

- Automated UI testing using **Selenium** and **Robot Framework** for multiple internal applications, replacing manual testing taking up to **1+ hrs/day**
- Built CI/CD pipelines using **Azure DevOps** and **Octopus** to deploy UI tests and configure their scheduled execution
- Began development of a full-stack **REST**ful Web Application with **ASP.NET Core, React, and SQL Server** Database, allowing the department director to manage employee work hours

PROJECTS

Ray Tracer – CS 488 Final Project: https://student.cs.uwaterloo.ca/~cs488/gallery-A5-2023-2024.html

- Developed a ray tracer in **C++** integrated with a **Lua-based** hierarchical model framework, enabling rendering of complex 3D scenes
- Designed and Implemented **advanced rendering features** such as texture mapping, bump mapping, anti-aliasing, constructive solid geometry, reflection, refraction, depth of field, soft shadows, and Phong shading
- Secured a "**Silver**" ranking out of **27** students for the final submission, evaluated based on render quality, scene aesthetics, overall features demonstrated, code quality, and documentation

C++ Ascii Game Engine – CS 246E Final Project

- Designed and implemented a game engine written in **C++** that allows developers to create ASCII art games
- Employed various **OOP** design patterns (**MVC, Visitor, Strategy**, etc.) to increase engine flexibility and versatility

LACS Compiler – CS 240E Course Project

- Developed a compiler in **Scala** for a simple functional programming language (**Lacs**) targeting **MIPS**
- Added support for arithmetic, variable scope, static types, nested functions, closures, and garbage collection

EDUCATION

University of Waterloo – *Waterloo ON, Canada* September 2021 – April 2026

- Candidate for Honours Bachelor of Computer Science, Co-op – **3.9 (89%) Cumulative GPA**
- Courses:
    - Algorithms, Operating Systems, Object Oriented Software Development (Enriched), Data Structures/Management (Enriched), Introduction to Database Management, Numerical Computation, Introduction to Machine Learning, Introduction to Computer Graphics
    - Statistics (Advanced Level), Introduction to Combinatorics (Advanced Level), Introduction to Optimization, Introduction to Graph Theory, Applied Cryptography