

ZIXI (SAM) TANG

zixi.sam.tang@gmail.com | (647)-394-7572 | [Github](#) | [Linkedin](#) | [Portfolio](#)

Technical Skills

- **Languages:** C#, C++, Java, Python, CSS, HTML, JavaScript, SQL, C
 - **Technologies:** React.js, SQL Server, .Net, Azure, Entity Framework Core, Bootstrap
-

Experience

Full-stack Developer | ZOMP

Apr. 2023 – Aug. 2023

- Utilized **XAML (WPF)** to display front-end functionality, showcasing a dropdown list of dates extracted from an Excel sheet through **scraping** techniques
- Implemented database entries using **.NET 8** objects through the **Code-First methodology** with **Entity Framework Core** for **SQL Server** integration
- Spearheaded the migration from a localized application to a scalable **cloud-based server** environment by implementing a robust **RESTful API** architecture, optimizing performance, scalability, and adaptability to evolving business needs
- Established a centralized **cloud-based service** hosted with **Azure SQL Database**, **Azure App Service**, and **Azure Cloud File Server**
- Thoroughly **tested** APIs utilizing **Postman**, ensuring comprehensive coverage and reliability in functionality

Front-End Website Developer | FOCUS Youth

Apr. 2021 – Dec. 2021

- Successfully met deadlines by developing an interactive and captivating website using **HTML**, **CSS**, and **JavaScript**, ensuring timely delivery without compromising quality
 - Utilized the **Bootstrap** framework to create responsive and aesthetically pleasing web designs
 - Collaborated within a **dynamic team environment**, prioritizing agility and teamwork to consistently meet and exceed customer satisfaction
-

Projects

Sudoku Solver | React.js, CSS | [Github](#)

- Employed the **React** framework to develop a web application providing Sudoku solving services
- Utilized **React hooks** extensively to streamline state management and component logic, enhancing code modularity, maintainability and scalability of the application
- Deployed **bit masking** algorithms to significantly **optimize efficiency**, reducing the time complexity of validating node inputs from **O(n)** to **O(1)** for improved computational performance

Sudoku Solver Backend | C#, .Net 7, SQL, SQL Server | [Github](#)

- Developed a **.NET 7 (C#)** web application to craft custom **APIs**, facilitating communication with **backend** logic
- Established a local SQL database using **SQL Server**, importing and organizing **9 million** Sudoku puzzles from a **CSV** file

Rainet Game (CS 246 Final Project) | C++

- Employed the **observer pattern** to develop responsive UI components, enabling seamless updates and interactions in real-time for an enriched user experience
- Implemented the **RAII (Resource Acquisition Is Initialization) idiom** using **unique pointers** and **shared pointers**, ensuring a **memory leak-free application**
- Implemented the **factory pattern** to facilitate various game modes, spanning from 1-vs-1 matches to 4-player free-for-all matches, each featuring distinct game boards and abilities
- Designed and managed a **scalable** game board system, using **polymorphic** classes to accommodate diverse board pieces effectively, ensuring adaptability and flexibility to meet evolving game requirements

Personal Website | React.js, CSS | [Github](#)

- Employed **React.js** to develop reusable web elements, significantly enhancing the scalability of the website by promoting modular and efficient component architecture
-

Education

University of Waterloo

Sep. 2022 – Apr. 2027 (Expected)

Candidate for the Bachelor of Computer Science

Waterloo, Ontario

- Relevant courses: Object-Oriented Software Development, Designing Functional Programs, Elementary Algorithm Design & Data Abstraction
- GPA | **4.0**