

Isshana Mohanakumar

✉ imohanak@uwaterloo.ca

☎ 647-554-5022

🐙 /iissh

🌐 /iissh

🌐 iissh.ca

Skills

Languages: C++, Python, JavaScript, C, Java, SQL, C#, R, Bash/CLI, HTML, CSS

Libraries/Frameworks: React Native, React.js, Node.js, Next.js, Axios.js, Google Auth, Django, Tailwind, Pygame

Tools: Postman, Git, VS Code, Visual Studio, Linux, Bash, Jira, Office, Adobe Suite

Work Experience

Game Programmer | Eden Industries

May 2022 – Aug 2022

- Programmed data-saving, UI, and gameplay of multiple video games using **C++** and **Object-Oriented Principles**
 - Includes character customization, combinations, & transformations, navigation, and battalion operations
- Implemented an army movement system with **5** different formations using **vectors** and **polar coordinates**
- Designed and coded multiple functional and interactive menus with **class inheritance**, **virtual functions**, **XML** files
- Created **C++ templates** to handle **8+** aspects relating to creating and modifying characters
- Decreased **memory allocation** required by **10%** by optimizing saving game data

Software Developer Intern | Filament AI

May 2021 – Aug 2021

- Collaborated with a team of developers to create and deploy a student administration system with **7+** pages and **12+** features which increased the sales by **50%**. This includes:
 - Built an analytics dashboard with a **React** frontend
 - Automated CSV data imports with **MySQL** & constructed a React page that handles large data.
- Developed an **automated** program to generate test-suites for chatbots by examining the dialog tree and executing them using Post (**Postman**) requests and **Axios.js**. Sped up the testing process by **200%**.
- Improved and created **6+** UX/UI features & **functional** UI elements into production on multiple chatbots for clients.
- Adopted **agile** methodology by working in product-oriented teams through daily stand-ups and sprint-planning.

CEO & Academics Tutor | Expert Scholars

Jan 2019 – Present

- Founded a tutoring organization, managed **10+** tutors, and teaching to **30+** students in Math, Computer Science, French and Science by constructing personalized lessons to enhance their understanding.
- Led to noticeable improvement in academic grades and **100%** parent & student satisfaction.

Projects

Biquadris 🎮

C++ </>

- Programmed a two-player Tetris clone using the **Observer**, **Decorator** and **Factory Method** design patterns.
- Developed a text-based display and implemented a **GUI** using **Xming** to enhance the UI/UX for players.

Play Buddies 🎮

React Native, Tailwind CSS, HTML, Firebase, Expo, Context API, Google Auth </>

- Designed and developed an **iOS** app that matches like-minded gamers using a matching-algorithm.
- Used **firebase** to implement real-time messaging, **Google authentication** for users, and profile customization.

Xit 🎮

Java </>

- Text-based adventure game where players can make decisions which impact the game differently.
- Includes level-generation using **inheritance**, usable game objects using **abstraction**, and **data encapsulation**.

Education

University of Waterloo - Bachelor of Computer Science

Sept 2020 – Apr 2025

Relevant Courses: Data Structures and Algorithms (C), Object Oriented Programming (C++)

GPA: 3.8/4.00

Additional Information

Affiliations: Tall Pines Retirement (Event Planner), Sports Teams (Captain/Member), Best Buddies (Vice-President)

Hobbies: Web design/development, Game design/development, Video games, Sports, Fitness, Community volunteering