KAYNE CHU

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Experience

Microsoft **Feb. 2023 – May 2023**
Software Engineer Intern *Vancouver, BC*

- Implemented features for several internal software applications used in game development at The Coalition
- Reworked automation process to run custom tests locally for various game builds and devices using C# and WPF
- Ensured efficient and durable application processes by developing multithreaded programs
- Created CI/CD pipeline jobs in Azure DevOps to build and deploy internal libraries used by developers
- Reduced application memory usage by 20% using performance profilers to detect memory leaks

AI Arena **Mar. 2022 – Nov. 2022**
Game Developer *Toronto, ON*

- Designed and implemented core game logic for an AI-based platform fighter game using JavaScript and ThreeJS
- Reduced opponent knockout computation time by 90% through approximation of knockback trajectory
- Improved existing visual effects system to allow queuing and playing multiple effects simultaneously
- Streamlined collision detection system by reworking existing spatial hash map updates

MCAP Mortgages **Sep. 2021 – Dec. 2021**
Software Engineer Intern *Waterloo, ON*

- Implemented front-end features for a large-scale mortgage web application using Vue and VueX
- Ensured code integrity through test-driven development by creating unit tests using Jest to achieve a coverage of 95%
- Optimized project timelines by effectively managing tasks in an Agile environment

BWX Technologies **Jan. 2021 – Apr. 2021**
Process Engineer *Cambridge, ON*

- Overhauled training evaluation software for a multi-million-dollar nuclear project using Excel VBA
- Improved data collection efficiency by 50% by implementing user feedback and optimizing data compiling features
- Assessed training processes with collected data to evaluate inefficient procedures and provide recommendations

Projects

BrawlBuddies | *React, Express, MongoDB*

- Created a website to retrieve Brawlhalla player data and match users in the same region with similar in-game rank
- Encrypted and secured user information stored in a MongoDB database using JSONWebToken authentication
- Retrieved and updated user data by processing server requests through a REST API created with Express
- Dynamically rendered player information using React components and MaterialUI

Workout Tracker | *React, Express, MongoDB*

- Developed a React web application to create, edit, and display workouts stored in a MongoDB database
- Constructed an Express server to handle POST and GET requests for retrieving and creating workouts

Escape The Cave | *Java, Android Studio*

- Developed a score-based mobile application that involves player interaction with a virtual character using Java and Android Studio
- Worked through several iterations to fix diagnostic issues and optimize the performance of the application

Education

University of Waterloo **Waterloo, ON**
Bachelor of Applied Science in Mechanical Engineering *Sep. 2019 – Apr. 2024*

Technical Skills

Languages: JavaScript, TypeScript, Java, C++, C#, Python, HTML/CSS, XAML
Frameworks: React, Vue, VueX, WPF, .NET, Node, Express, MongoDB, MaterialUI
Technologies: Git, Jest, Postman, Heroku, Netlify