

KAYNE CHU

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Experience

Ceridian

Sep. 2023 – Present

Software Engineer Intern

Toronto, ON

- Developed features for Career Explorer, generating \$1M in sales by allowing employees to manage their career growth
- Implemented and enhanced React frontend service features using TypeScript with Cypress for robust integration testing
- Streamlined page navigation features using Redux, resulting in a more scalable architecture for session browsing
- Created efficient backend microservices using C# and .NET to query and manipulate MongoDB and SQL databases, resulting in a 15% increase in overall microservice throughput

Microsoft

Feb. 2023 – May 2023

Software Engineer Intern

Vancouver, BC

- Implemented features for Sledge, an internal software application used in game development at The Coalition
- Reworked automation process for over 200 engineers to run custom tests locally for various game builds and devices
- Ensured efficient and durable application processes by developing multithreaded programs using C# and WPF
- 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 components for an AI-based platform fighter game using React and ThreeJS
- Reduced opponent knockout computation time by 90% through approximation of knockback trajectory
- Enhanced existing visual effects system, allowing multiple effects to be played simultaneously using a buffer
- Streamlined collision detection system by reworking existing spatial hash map updates

MCAP Mortgages

Sep. 2021 – Dec. 2021

Software Engineer Intern

Waterloo, ON

- Implemented frontend features for a large-scale mortgage web application using Vue and Vuex
- Ensured code integrity through test-driven development using Jest to achieve a code 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

SixthSense | TensorFlow, Python

- Created a wearable accessibility aid for individuals with visual impairment to prevent accidental collisions with objects
- Developed and trained a custom object detection model using TensorFlow Lite to determine specific objects of interest
- Deployed custom model to a Raspberry PI board to allow seamless integration with cameras and mechanical components

BrawlBuddies | React, Express, MongoDB

- Created a web application using React to retrieve Brawlhalla player data and match users based on region and rank
- Encrypted and secured user information stored in a MongoDB database using JSONWebToken authentication
- Retrieved and updated user data by processing server requests through REST API endpoints created with Express

Escape The Cave | Java, Android Studio

- Developed a mobile application involving 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 with Software Engineering Option

Sep. 2019 – Apr. 2024

Relevant Courses: Data Structures and Algorithms, Distributed Computing, Reinforcement Learning

Technical Skills

Languages: JavaScript, TypeScript, Java, C++, C#, Python, Scala, SQL, HTML/CSS, XAML

Frameworks: React, Vue, WPF, .NET, Spark, Hadoop, Kafka, Node, Express, MongoDB

Technologies: Git, Jest, Cypress, Postman, Heroku, Netlify