Alexander McRae

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Education

University of Victoria — September 2017 - present
Bachelor of Science in Computer Science, Minor in Business

Relevant Skills

Programming Languages

Rust, C/C++, Go, Python, Elixir, JavaScript, Bash, C#, Awk, SQL

Other

Git, Docker, Linux, RISC-V, Vulkan, React, Vue, Webpack, Travis-ci

Experience

Graphics Programmer at Suntracker Technologies Ltd (Sept 2019 - April 2020)

- Developed a Rhino3D rendering engine using specialized global illumination algorithms for analysis of CAD models.
- Participated in Illumination Engineering Society talks on industry standards and cutting edge technologies in the industry.
- C#, C/C++, OpenGL, Rhino3D, Win32 API

Campus Ambassador at BattleSnake (Jan 2020 - Current)

- Worked with tech-oriented student groups to organize and run BattleSnake events, tutorials, and competitions
- Helped develop starter code templates in many languages for new contestants

Projects

MobilityFirst: TCP Extension mcraealex.github.io/research/csc466

- Currently developing a protocol and programming interface that allows for peers to migrate to different networks and change IP addresses without losing connections. The goal is to be compatible with existing TCP/IP stacks unmodified.

AlpineToast: JavaScript Popup Library github.com/McRaeAlex/AlpineToast

- Created an extensible JavaScript library that allows users to create customizable notification popups both programmatically and through plain HTML attributes.
- Typescript, Webpack, Rollup, TailWindCSS

Village: Social media for small friend groups github.com/McRaeAlex/village

- Developed a social media application that allows users to take control of their social media presence and only share with whom they feel comfortable.
- Elixir, Postgresql, JavaScript, HTML, CSS, CRUD, Websockets, PubSub, Docker

Connector: HTTP Framework github.com/McRaeAlex/Connector

- Designed and implemented an HTTP library, language extension, and example project to better understand how high-performance web servers operate. Includes pattern matching router and demo application using an async runtime.
- Rust, HTTP, Async IO