

# Alexander McRae

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## Education

University of Victoria

*Bachelor of Science in Computer Science, Minor in Business*

September 2017 - present

## Relevant Skills

### Programming Languages

C/C++, Rust, Go, Haskell, Python, Java

### Web Development

Typescript, React, Vue, Nodejs, MongoDB, SQL, Express

### Graphics

Ray Tracing, OpenGL, WebGL

## Projects

### Ray Tracer [github.com/McRaeAlex/tiny-raytracer](https://github.com/McRaeAlex/tiny-raytracer)

Implemented an extensible rendering engine with lighting, reflection, and refraction.

### Tiny URL [github.com/McRaeAlex/tinyURL](https://github.com/McRaeAlex/tinyURL)

Developed a web application that compresses URL's, allowing the user to go to the shorter URL and see the original website.

### Snake Engine [github.com/McRaeAlex/dimensional-snake-engine](https://github.com/McRaeAlex/dimensional-snake-engine)

Built an implementation of the game Battle Snake using an entity components system (ecs).

### Typescript/React Game Interface [github.com/McRaeAlex/DSnake-Typescript](https://github.com/McRaeAlex/DSnake-Typescript)

Created a progressive web application using Reactjs and TypeScript which serves as the front end for a HTTP game I created.

### Cat Camera [github.com/McRaeAlex/prettykitty](https://github.com/McRaeAlex/prettykitty)

Using a Raspberry Pi, Twilio, and Nodejs, created an application that takes pictures of cats and sends them to users in response to a text message.

### What To Eat [github.com/McRaeAlex/WhatToEat](https://github.com/McRaeAlex/WhatToEat)

Made a web application using Golang and SQL that gives the user a random recipe. The user can then choose if they like that recipe or if they do not like it another is shown.

## Experience

### Battle Snake 2019 [github.com/McRaeAlex/BattleSnake2019](https://github.com/McRaeAlex/BattleSnake2019)

Participated in a local coding competition and created an HTTP server which plays a version of the game snake.

### Advent Of Code [github.com/McRaeAlex/AdventOfCode2018](https://github.com/McRaeAlex/AdventOfCode2018)

Participated in global coding competition facing various coding challenges leading up to Christmas.

### Web Development Club

Take part in discussions, talks and projects in a group regarding web technologies.

## **Rocket Club**

Predicted the landing of the rocket using real time data coming from the rocket. Gained experience working with a large team and many different sub teams.

## **Interests**

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Running, Guitar, Camping, Economics