Zachary Swensrude

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Experience

Web Developer at Dominarlo — *Internship*

April 2023 - Current

Working with JavaScript to create a React web app using Meteor, Node, and MongoDB in order to create gamification in a business context.

Costco, Sherwood Park, Alberta — *Night Merchandising*

June 2021 - Current

Projects

Lich's Lair — *Roguelike action RPG made in Unity*

Lich' Lair is a top-down pixel-based roguelike action RPG game created in Unity game engine for my Fall 2023 Capstone project. In our 2-person group we spent 3 months designing, developing, and user testing to create our game. We created all assets by hand, except music and fonts. Play the game: GitHub Pages WebGL build | See the code: GitHub repo

Model UN Club Web Application — *JavaScript/React*

[in development] Conference web app we are creating in a 4-person group for the Model UN Club at MacEwan for our Winter 2024 Capstone project. It is a Full Stack web application using React, MongoDB, and Node.js.

DuckyBot — *Human Following Pet Robot*

In my robotics class I built an Arduino-based robot which uses a PixyCam to track its user and follow them around the room. I custom 3D designed its chassis to resemble a rubber ducky and to keep all the hardware enclosed in a small and modular frame. | See the code: GitHub repo

Restaurant Scheduling System — *Android Studio Java App*

Worked as a group in my Software Engineering class to create an android scheduling app for a restaurant. We used SQLite for the database. See our recorded presentation here: https://youtu.be/b3mSuJTchzc

Cube Crusher — *JavaScript/WebGL Game*

Worked with a partner to produce a BrickBreaker type game in under two weeks using JavaScript for the mechanics and WebGL for the visuals. A custom game engine was used. | Video demo: Cube Crusher Demo.mp4

Secure Mail Transfer Program — *Python Client/Server App*

Worked as a group in my Networks class to make client and server applications in python which uses SHA256 encryption to transfer files to a server, and is able to handle up to 5 clients in parallel. [Private repository]

Education

Macewan University, Edmonton, Alberta.

2019 - Ongoing

Bachelor of Science with a major in Computer Science and a minor in Psychology.

Currently in the last year of my program with a 3.94 GPA.

Expected graduation April 2024.

Skills/Languages

Advanced: C#, Unity, JavaScript, React, Java, Python, Git, CSS

Familiar: C, HTML, MongoDB, SQL, Front-end design, UNIX

Professional Affiliation

XR Media Research Group

September 2023 - Current

We are currently in the process of researching, writing, and (hopefully) publishing an academic paper on Context Steering - one of the algorithms we built Lich's Lair around. https://viewport.ca/xrmrg/

Relevant Courses

Object-Oriented Programming

Real-Time Gaming

Web Application Development

Computer Graphics

Software Engineering

Data Mining & Advanced Databases

Data Structures and Algorithms