Zachary Swensrude

linkedin.com/in/zachary-swensrude | github.com/ZSwensrude | Portfolio

Work Experience

Full Stack Developer at Dominarlo — *Internship*

April 2023 - Current

Working with JavaScript to create a React frontend web app using Meteor, Node backend, and MongoDB database.

Costco, Sherwood Park, Alberta — *Night Merchandising*

June 2021 - Current

Projects

Mac-UN: A Model UN Web Application — *JavaScript/React*

Web app created in a 4-person group for use in a provincial Model UN Conference at MacEwan for our Winter 2024 Capstone project. Meteor framework web application using React, MongoDB, and Node.js. Site

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

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 - 2024

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

Currently awaiting graduation with a 3.94 GPA.

Expected graduation June 2024.

Skills/Languages

Advanced: JavaScript, C#, Unity, 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 publishing an academic paper on Context Steering - one of the algorithms we built Lich's Lair around, as well as a workshop paper on Space Evaders https://viewport.ca/xrmrg/

Relevant Courses

Web Application Development

Object-Oriented Programming

Real-Time Gaming

Computer Graphics

Software Engineering

Data Mining & Advanced Databases