# SAMUEL LYON

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Northeastern University

Student at Northeastern University studying Computer Science and Mathematics. Programming with Rust, Unity, Godot, passionate about free + open source software and democratizing computer science education.

## EDUCATION

**Northeastern University, BS Computer Science and Mathematics**                    **2020 - 2024**
- GPA 3.87
- Major Specific GPA 4.0
- Northeastern Honors College, Dean's List Fall 2020, Spring 2021

**Relevant Coursework:** Accelerated Fundamentals of Computer Science I, II • Logic and Computation • Linear Algebra

**Mystic Valley Regional Charter School**                    **2016 - 2020**
- 6 IB HL courses; wrote IB Extended Essay investigating post-quantum cryptography
- Premio de Plata recipient (92nd percentile National Spanish Exam)
- STEM Club (4 years), National Honors Society (3 years), Class Secretary

**Additional Cousework:**
- Harvard CS50 - Introduction to Computer Science (2018)

## SKILLS

- Languages: Python, C#, Rust, C, Java, Racket, C++, SQL, HTML/CSS/JS, ACL2
- Systems: Linux, macOS, Windows, WSL2
- Frameworks: Flask, actix-web, discord.py
- Technologies: Unity, Git, Github, PostgreSQL, Redis, SQLite3

## EXPERIENCE

**Cofounder, SEngine**                    **April 2021 – present**
- finalist for Northeastern's Entrepreneurship Club
- building service allowing users to develop custom WASM binaries, deliver binaries to end users
- integrating React.js frontend with a Node + Rust backend and WebAssembly

**Teacher/Coach, Mystic Swimming**                    **September 2017 – Mar 2020**
- directed 3 groups of children aged 4-10 in swim lessons weekly
- served as a mentor and oversaw classes for newer volunteers

## PROJECTS

**Handins CLI**                    **Mar 2021 - Present**
- wrote Rust command line application to fetch and compute grades from university homework server Bottlenose
- allows uploading homework files and fetching feedback via the command line

**Contributor to the Ocarina of Time decompilation effort**                    **Feb 2021 - Present**
- Reverse engineered MIPS assembly code to C to get C code exactly matching an original binary

**Anonymous messaging Discord bot**                    **Dec 2020 - Feb 2021**
- Hash-based moderation system using Redis, allowing moderators to block users while maintaining anonymity
- Deployed Python code to Heroku for 24/7 uptime
- code available here

**Soulful**                    **Apr 2020**
A rhythm game made in Unity where it's easy to create and play beatmaps made by others

**Super No Touchy Flooro**                    **Aug 2019**
A challenging 2D platformer with 40+ levels of original gameplay - Uses custom 2D collision within the Unity engine for accuracy and smooth gameplay - play the game here

**Additional Projects:**
- tutoring forum for CalHacks 2020,
- binary multiplication implementation for Replit Challenge #1 (placed first),
- top down shooter for the Replit Game Jam

## INTERESTS

free and open source software, game development, speedrunning, music production, reverse engineering/decompilation, swimming