

MARY STRODL

Computer Scientist Seeking a Summer 2022 Co-op

PROJECTS

ColecoVision Emulator

<https://github.com/mstrodl/pen>

- Wrote a Z80 (ColecoVision CPU) emulator in TypeScript, from the documentation without external libraries
- Reverse-engineered video and sound processors
- Developed a deep understanding of the internal operations of a computer

Tools: WebAssembly, TypeScript, JavaScript, Parcel Bundler

Gatekeeper Access Control System

<https://github.com/mstrodl/gatekeeper-door>

- Gatekeeper is a door lock system to control access to Computer Science House special rooms
- Gatekeeper uses NFC (DESFire) tags to authenticate users
- Wrote server which pulled data from LDAP and communicated with doors over MQTT

Tools: NodeJS, Rust, Embedded Systems, MQTT, Express, MongoDB

Elcord

<https://github.com/mstrodl/elcord>

- Emacs minor mode to display the current file in a Discord status
- Reverse engineered Discord's RPC protocol
- Requires no native dependencies
- Nearly 6000 downloads on MELPA

Tools: Emacs Lisp

Webii

<https://github.com/mstrodl/webii>

- A system for playing Wii games in a social setting using any web browser as a remote
- Developed a NodeJS backend which communicated with the Dolphin Wii emulator using a largely undocumented internal format which had to be reverse-engineered
- Wrote a React frontend to allow users to connect and play with their device with full motion support

Tools: React, NodeJS, WebSockets, Parcel

EXPERIENCE

RIT Computer Science Department

Student Lab Instructor

August 2021 - Present

Rochester, NY

- Helped students with coursework and programming questions
- Provided mentoring to students who needed it
- Wrote scripts to automate grading of submissions

Tools: Python, Java, Bash Scripting

github.com/mstrodl

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EDUCATION

Rochester Institute of Technology

Computer Science B.S.

Expected Graduation May 2026

SKILLS

Languages

JavaScript TypeScript C++ Rust HTML/CSS
SCSS/SASS Java Python Svelte

Tools

Express Webpack Parcel React NGINX
Linux Git GitHub Bash MongoDB

ACTIVITIES

Computer Science House

Member

August 2021 - Present

Computer Science House is a student-run organization based at RIT dedicated to providing a productive, inclusive, and educational community for everybody interested in Computer Science.

RTP

September 2021 - Present

Root-type-persons manage and maintain house-provided computing resources for members, including a Kubernetes cluster, a student-run server room, and other member projects.

Society of Software Engineers

Member

August 2021 - Present

The Society of Software Engineers (SSE) is a student organization at RIT composed of software engineers, computer scientists, and other students. The SSE provides mentoring and a community for students.

Women in Computing

Member

August 2021 - Present

Women in Computing is an all inclusive organization that provides an interdisciplinary networking forum for students, faculty, staff and alumni involved in the field of computing at RIT through professional, leadership, mentorship, and technical development opportunities.