






# MARY STRODL

Computer Scientist Seeking a Summer 2022 Co-op

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## 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*

## 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

 May 2021 - Present

CSH is a student-run organization at RIT providing a productive, inclusive, and educational community for everyone interested in Computer Science.

#### System Administrator

 September 2021 - Present

Managed and maintained 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.