

# WILL NILGES

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## OBJECTIVE

Seeking a Computer Engineering Co-Op for Summer/Fall 2021

## EDUCATION

**Rochester Institute of Technology** | Computer Engineering B.S.

GPA: 3.43

Expected Graduation: Spring 2023

## EXPERIENCE

**Council Rock** | Software Engineering Co-Op

*May 2020 — Present*

- Create, configure, and maintain Ubuntu Core, Yocto, and OpenWRT images
- Develop full stack and embedded applications in a plethora of languages
- Build and maintain DevOps-related services on Portainer and Proxmox

**The Reporter** | System Administrator

*November 2019 — Present*

- Maintain physical and virtual computing services for The Reporter Magazine
- Manage Proxmox cluster running essential public and internal tools
- Build and maintain new services such as Jira and Nextcloud.

**Mastodon Design** | Software Engineering Co-Op

*May 2019 — August 2019*

- Designed and built test suites for custom communication equipment
- Reverse engineered and simulated binary messages and signals
- Designed and built thermal testing software for mil-spec stress tests

**Rochester Institute of Technology** | Linux System Administrator

*August 2018 — May 2019*

- Supported and maintained Red Hat systems using Ansible
- Patched and protected computing resources for the College of Engineering
- Work with students and professors to build solutions for a variety of projects

## PROJECTS

**BetterVent** | Kotlin, Java | [github.com/WillNilges/BetterVent](https://github.com/WillNilges/BetterVent)

- Room schedule viewer for Android that is lightweight and easy to use
- Interacts with the Google Calendar API to manage events on CSH's main calendar

**ShelfLife** | Rust, TypeScript | [github.com/WillNilges/ShelfLife](https://github.com/WillNilges/ShelfLife)

- OpenShift project management, backup, and monitoring system
- Automatically notifies admins and backs up project configurations
- Manages and limits resources to stale projects

**Directional AC** | C++ | [github.com/WillNilges/DirectionalAC](https://github.com/WillNilges/DirectionalAC)

- Computer vision-enabled gyroscopic fan control system
- Uses OpenCV to track users and automatically adjust its air stream
- Custom designed 3D-printed chassis

**The Death Panel** | Rust | [github.com/ComputerScienceHouse/altctrl](https://github.com/ComputerScienceHouse/altctrl)

- Led team-based project for Imagine RIT 2020
- Custom-built control panel that interfaces with specialized games and software
- Open source and hackable for use with other games or tools

**Octo Dash Curses** | C | [github.com/WillNilges/octo-dash-curses](https://github.com/WillNilges/octo-dash-curses)

- Terminal-based frontend and dashboard for OctoPrint
- ncurses GUI useful for monitoring and control, can be accessed remotely

## SKILLS

### Languages

C, C++, BASH, Rust, ARM Assembly, VHDL, Python, JavaScript

### Operating Systems

Red Hat Enterprise Linux, Fedora, Debian, Ubuntu, Arch Linux, PFSense, Cisco IOS

### Hardware

Oscilloscopes, Wave Function Generators, Multimeters, Soldering Equipment

### Software

Vivado, Quartus II, Modelsim, JetBrains IDE, Qt Creator, Ansible, Proxmox, Portainer, OpenShift, SonarQube, CMake

## ACTIVITIES

### Computer Science House / Root Type Person

Living-learning community focused on technical projects, knowledge, and skills. Root Type Persons maintain and manage computing resources and web services for members of the house and offer guidance and knowledge for projects

### RIT Linux Users Group

Enthusiast group dedicated to developing and spreading Linux knowledge and skills

### Scouts of America

Eagle Scout, Order of the Arrow

## COURSES

Assembly and Embedded Programming,  
Digital System Design II,  
Circuits I,  
Computer Science II,  
Spanish for Science and Tech