

# John C. Allwein

<https://johnnyapol.me> - <https://github.com/johnnyapol>

Email: [work@johnnyapol.me](mailto:work@johnnyapol.me)

## EDUCATION

### Rensselaer Polytechnic Institute

*Bachelor of Science, Computer Science and Economics*

*Graduated December 2021*

Troy, NY

GPA 3.96/4.00

## PROFESSIONAL EXPERIENCE

### Western Digital

*Senior Firmware Engineer*

Responsible for the firmware runtime environment for the enterprise-capacity hard-drive (HDD) products.

Longmont, Colorado

*January 2022-Present*

### Rensselaer Polytechnic Institute

#### Computer Science Department

*Undergraduate Programming Mentor*

*Spring 2019, Summer 2020, Spring 2021, Fall 2020,*

*Summer 2021*

Held undergraduate programming mentor positions for Computer Science 1, Data Structures, Open Source Software, and Operating Systems. Assisted in hands-on laboratory experiences and office hours for hundreds of students.

Troy, NY

## PROJECTS

### <https://torn.space>

*Developer, System Administrator*

<https://github.com/TornDotSpace/Torn>

*October 2018 - Present*

Provided crucial infrastructure upgrades such as deploying HTTPS across the game, converting the flatfile database to MongoDB, and developing an automated deployment system. Worked on improving game security and optimizing network usage via a delta-compression system for update packets.

### QuACS - RPI's (Qu)estionably (A)ccurate

<https://quacs.org> - <https://github.com/quacs/quacs>

#### (C)ourse (S)cheduler

*Developer*

*Summer 2020 - Present*

Implemented a compression algorithm that reduced storage needs for course conflict data by almost 97%. Worked on split-semester course conflict checking. Improved automated deployment system to do smart partial upgrades, reducing the typical update time by 90%.

### RPICovidScraper

*Creator, Developer*

<https://github.com/johnnyapol/RPICovidScraper>

*Fall 2020 - Present*

Created an alternative to Rensselaer's COVID-19 dashboard that introduced additional features such as tracking of two-week cases, generating graphs for case trends, and archival of data. Utilized Discord webhooks to increase accessibility of the data to the campus community and draw in thousands of viewers each week.

## SKILLS

**Languages:** Python, C++, C, Java, .NET framework, Node.JS + Javascript + Typescript, MIPS and ARM assembly, R, GTK, Rust, Linux Shell Scripting

**Software:** GNU/Linux, NGINX, Git, GDB, LaTeX, Microsoft Windows 98-10, Microsoft Office, MongoDB

## ACTIVITIES AND INTERESTS

**Member, Treasurer,** RPISEC

2020 - December 2021; Treasurer May 2021-December 2021

**Member,** Upsilon Pi Epsilon (UPE) at RPI

Spring 2020 - December 2021

**Member,** Rensselaer for Ethics in Science, Technology, and Engineering (RESET)

May 2019 - May 2020

## HONORS

Rensselaer Founder's Award of Excellence

November 2021

Rensselaer Medal

2018