

# Samuel Johnson

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## EDUCATION

The Pennsylvania State University, University Park  
College of Engineering  
Bachelor of Science in Computer Engineering | GPA: **3.94**

2018 ~ 2021

## TECHNICAL SKILLS

Python, C, C#, Java, HTML/CSS, Git, Linux, Unity, Agile, Webflow, Assembly

## PROJECTS

2021

**Call Stats [Python]** – Developed a discord bot to observe voice activity on a voice channel and provide users with interesting statistics. Used discord.py to collect the data and Plotly to visualize it. [sam.johnson-clan.us/project-pages/discord-stats.html](https://sam.johnson-clan.us/project-pages/discord-stats.html)

**Signal Sampler [Assembly]** – Utilized a serial connection to take 1024 samples of a signal at a rate of 8 kHz and print out the analog to digital converter values to the terminal. Programmed onto a MC9S12C microcontroller and tested using the manufacturer provided simulation software. [sam.johnson-clan.us/project-pages/signal-sampler.html](https://sam.johnson-clan.us/project-pages/signal-sampler.html)

2020

**Lion Cloud Storage Driver [C]** – Created a functional storage driver to access a collection of virtual devices using C and its default libraries. Successfully passed all given test cases throughout the semester long project which contributed to an A in my systems design class. [sam.johnson-clan.us/project-pages/lion-cloud-simulator.html](https://sam.johnson-clan.us/project-pages/lion-cloud-simulator.html)

**Spell Selection Interface [C#/Unity]** – Built an application using Unity that displays a group of scriptable objects and their attributes with a distinct and intuitive interface. Implemented within two different scenes made from scratch in the Unity engine and custom C# scripts. [sam.johnson-clan.us/project-pages/spell-selection-interface.html](https://sam.johnson-clan.us/project-pages/spell-selection-interface.html)

2018

**Automated Fire Detection and Aid System [Arduino/Hardware]** – Employed the use of a network of Arduino sensors connected over Wi-Fi to automatically detect fire and unlock outfitted doors, assisting firefighters. Won 4<sup>th</sup> place at the PA Governor's STEM Competition. [sam.johnson-clan.us/project-pages/doora.html](https://sam.johnson-clan.us/project-pages/doora.html)

## EXPERIENCE

### Penn State Learning – Math Peer Tutor

2019 – Present

- Tutored and mentored students in 25+ math courses at Penn State's Learning Center.
- Adapted to individual student's specific materials and requests.
- Led end of year exam review for trigonometry students.

### DevPSU Startup – Project Manager, Software Engineer

2019 – 2020

- Developed a tool for matching Penn State students with clubs or activities after the completion of an interest survey.
- Created a base prototype of this tool aimed towards future implementation using machine learning and presented it to a group of corporate representatives during the Nittany AI competition.
- Led a team of students in the development of a Django web-app that provides schools or workplaces with the tools to manage submission and access of bullying/harassment reports.
- Responsible for managing the project with an agile/scrum development model and completing sprint progress reports throughout the project lifespan.

## HONORS, AWARDS, AND MEMBERSHIPS

- Dean's List
- Class of 1922 Memorial Scholarship
- Nittany AI Challenge First Stage Funding
- 1<sup>st</sup> Place, HackPSU Best Use of HERE.com Map API
- 4<sup>th</sup> place of 27 regional representatives in the State-level PA Governor's STEM Competition