

# Joshua Nichols

[joshuani@andrew.cmu.edu](mailto:joshuani@andrew.cmu.edu) | [linkedin.com/in/joshuaanichols](https://linkedin.com/in/joshuaanichols) | [github.com/joshuaan](https://github.com/joshuaan)

## EDUCATION

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### Carnegie Mellon University

*Bachelor of Science in Electrical and Computer Engineering*

Pittsburgh, PA

Aug. 2023 – May 2027

## EXPERIENCE

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### Undergraduate Research Assistant

*Texas A&M University*

June 2020 – Present

*College Station, TX*

- Developed a REST API using FastAPI and PostgreSQL to store data from learning management systems
- Developed a full-stack web application using Flask, React, PostgreSQL and Docker to analyze GitHub data
- Explored ways to visualize GitHub collaboration in a classroom setting

### Information Technology Support Specialist

*Southwestern University*

Sep. 2018 – Present

*Georgetown, TX*

- Communicate with managers to set up campus computers used on campus
- Assess and troubleshoot computer problems brought by students, faculty and staff
- Maintain upkeep of computers, classroom equipment, and 200 printers across campus

### Artificial Intelligence Research Assistant

*Southwestern University*

May 2019 – July 2019

*Georgetown, TX*

- Explored methods to generate video game dungeons based off of *The Legend of Zelda*
- Developed a game in Java to test the generated dungeons
- Contributed 50K+ lines of code to an established codebase via Git
- Conducted a human subject study to determine which video game dungeon generation technique is enjoyable
- Wrote an 8-page paper and gave multiple presentations on-campus
- Presented virtually to the World Conference on Computational Intelligence

## PROJECTS

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### Gitlytics | *Python, Flask, React, PostgreSQL, Docker*

June 2020 – Present

- Developed a full-stack web application using with Flask serving a REST API with React as the frontend
- Implemented GitHub OAuth to get data from user's repositories
- Visualized GitHub data to show collaboration
- Used Celery and Redis for asynchronous tasks

### Simple Paintball | *Spigot API, Java, Maven, TravisCI, Git*

May 2018 – May 2020

- Developed a Minecraft server plugin to entertain kids during free time for a previous job
- Published plugin to websites gaining 2K+ downloads and an average 4.5/5-star review
- Implemented continuous delivery using TravisCI to build the plugin upon new a release
- Collaborated with Minecraft server administrators to suggest features and get feedback about the plugin

## TECHNICAL SKILLS

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**Languages:** Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, R

**Frameworks:** React, Node.js, Flask, JUnit, WordPress, Material-UI, FastAPI

**Developer Tools:** Git, Docker, TravisCI, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse

**Libraries:** pandas, NumPy, Matplotlib