

# Matthew Grillo

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## EXPERIENCE

### Stupendous Software Developer Intern

June 2022 - Aug. 2022

*Parsons Corporation*

*Columbia, MD*

- Implemented software solutions for the NSA Cyber Exercise (NCX) Platform using Python, Flask, MariaDB, JavaScript, HTML, CSS, KVM, Docker, and Linux/Unix.
- Utilized Atlassian products Bitbucket, Confluence and Jira for Agile Team Development.
- Built REST API authenticated endpoints to allow for secure data ingestion and export.
- Designed data visualizations for the exercise's intelligence delivery, producing real-time analysis for events.
- Automated the deployment and control of virtual machines with back-end scripts to standardize VM interaction and validate configuration.

### Food and Beverage Management Intern

May 2021 - Aug. 2021

*Belle Haven Country Club*

*Alexandria, VA*

- Gained experience in leadership and learned the inner workings of business management.
- Applied problem solving skills by automating the scheduling process, minimizing the time needed to schedule my team.

## EDUCATION

### Virginia Tech, College of Engineering

Aug. 2019 – May 2023

*B.S. in Computer Science, Minor in Mathematics*

*Blacksburg, VA*

- Cumulative GPA: 3.3/4.0

## PROJECTS

### VT NotifyMe

Personal Project

*Python, BeautifulSoup, WebSockets, Docker, MariaDB*

*Apr. 2022*

- Leveraged the Discord API to create a notification system for students when a course has available seats.
- Utilizes multiprocessing techniques to web-scrape the Virginia Tech Timetable of Courses.

### Visualizing Grade Inflation

CS-3654: Data Analytics and Visualization

*Jupyter Notebook, Matplotlib, SciPy, NumPy, Pandas*

*Dec. 2022*

- Worked with a team to analyze and visualize trends in 20 years of university course distribution statistics.

### HTTP Server

CS-3214: Computer Systems

*C, POSIX threads, JSON Web Tokens, Jansson, Docker*

*Dec. 2022*

- Wrote a personal HTTP/1.1 server in C which supports IPv4 and IPv6, JWT validation and authentication, IDOR blocking, and concurrent connections via multithreading.
- Containerized and deployed on a remote cluster.

### Thread Pool

CS-3214: Computer Systems

*C, POSIX threads*

*Oct. 2022*

- Wrote a workstealing fork-join threadpool in C which implements futures, shared states, and thread signaling.

## CLUBS AND ACTIVITIES

### Sigma Phi Delta ( $\Sigma\Phi\Delta$ ) Fraternity

Feb. 2020 - Present

*Beta Delta ( $B\Delta$ ) Chapter at Virginia Tech*

*Blacksburg, VA*

### HackBI Hackathon Mentor and Event Organizer

Sept. 2018 - Present

*Bishop Ireton High School*

*Alexandria, VA*

## TECHNICAL SKILLS

**Languages:** Python, JavaScript, Java, C, C++, MATLAB, R, SQL, HTML, CSS, Shell Script

**Frameworks:** Flask, React, Node.js, Express.js, MariaDB, MongoDB, PostgreSQL

**Developer Tools:** Git, Vim, bash, VSCode, Docker, Google Cloud Platform, Eclipse, IntelliJ, UNIX, SSH, KVM, Atlassian Suite, TeX

**Soft Skills:** Agile Team Development, Collaborative, Communicative, Creative, Interpersonal Management, Leadership, Learning, Problem Solving