

Sam Carter

(509) 742 – 0691
Scarter6@zagmail.gonzaga.edu
[Samjcarter.com](https://samjcarter.com)
<https://github.com/SamCarter14>

EDUCATION

Gonzaga University – Spokane, WA

- Bachelor of Science in Computer Science
- Minor in Applied Mathematics
- Concentrating in Data Science and Software Application Development
- 3.89 GPA
- Graduating Class of 2026
- President of GU Association of Computing Machinery Club

Technical Skills

C++
Docker

Java
HTML/CSS

Python
Bash Scripting

PostgreSQL
Git/GitHub

Experience

Software Developer Internship | Groq, Liberty Lake

May 2024 - Aug 2024

- Developed a monitoring website using Apache, Python and Bash scripts to collect and display power consumption data from over 170 racks and 350 PDUs, with graphical displays for individual racks, cages, datacenter locations, and total racks.
- Utilized PostgreSQL database in a Docker container to store data, with a PostgreSQL client in another Docker container for data writing, scheduled with a cron job every 5 minutes.
- Employed Apache, htmx and Bash scripts for power cycling nodes, enhancing operational efficiency across 3 datacenters.
- Automated the process of adding new machines and racks with Bash scripts, facilitating future scalability.

Data Center Technician | Groq, Liberty Lake

July 2023 - Dec 2023

- Installed 5 racks of datacenter equipment each with 9 GroqNode Servers using rotational topology, as well as configuring 2 switches for each rack with IP Routing and default gateways.
- Developed a Bash script to automate the process of measuring the maximum power consumption for 90 servers across our racks and another to concurrently control 40 PDUs for efficient power management.

Teachers Assistant | Gonzaga University

Aug 2024 - Present

- Reviewed and graded assignments for 51 students in two Computer Science I courses, analyzing 50-500 lines of code per submission.
- Provided personalized feedback to each student to help them understand their mistakes and enhance their coding skills. Additionally, held regular office hours to provide further support and address student questions.

ACM President | Gonzaga University

April 2023 - Present

- Coordinated a multi-school Hackathon with local sponsors and held team meetings where people meet to code projects and learn new tools such as utilizing the school's server, GitHub Pages, and creating portfolio site projects.

Projects

MyPL Compiler

Feb 2024 - May 2024

- Constructed a comprehensive MyPL compiler with over 5,000 lines of Python code, featuring lexing, parsing, intermediate code generation, and type-checking.
- Expanded the compiler's capabilities to support ND arrays, enabling matrix operations and compatibility with structs and functions. Implemented over 500 unit tests to ensure functionality, accuracy, and stability.

Catan Unity Game

Sep 2024 - Present

- Developing a Catan-inspired game in Unity using C#, including the implementation of a depth-first search longest path algorithm to efficiently calculate the player's longest road with a time complexity of $O(V * (V + E))$.

Personal AWS Website

Aug 2024 - Present

- Designed and secured a personal website hosted on AWS S3 buckets with HTTPS, leveraging AWS Route 53 for custom domain registration. Configured billing alarms to monitor and optimize website hosting expenses.