Brian Muhic

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Education

Virginia Tech, College of Engineering — **Blacksburg, VA**
B.S Computer Science, Minor in Math — **Expected May 2026**
- GPA: 3.9

Technical Skills

Java, C, C++, Python, Linux, Bash, Assembly, Protobuf, Version Control (Git), Multi-Threading, Parallel Processing, Computer Systems, Data Structures, Object-Oriented Programming, Software Testing, Static Code Analysis, Apache Maven

Professional Work Experience

Software Engineer Intern | General Dynamics Mission Systems — **May 2025 – August 2025**
- Designed and implemented a unified configuration system by merging configuration files, backed by a Protobuf schema and parser.
- Wrote and integrated a Maven-based dependency management system, including a flexible script to automate downloading of third-party JARs based on custom arguments.
- Optimized configuration parsing by creating an efficient parser to ensure only required data elements are stored.
- Led a large-scale refactoring to update the logging system used across the code-base.

Software Engineer Intern | General Dynamics Mission Systems — **May 2024 – August 2024**
- Engineered a TCP-based data transfer protocol and implemented advanced data visualization functions to enhance accuracy in data analysis.
- Designed and implemented cross-language message handling interfaces between Java and C++ applications, facilitating real-time data exchange over TCP/IP for system performance optimization.
- Successfully executed a comprehensive code refactoring initiative, eliminating legacy CORBA dependencies to modernize and streamline the software architecture for improved maintainability.
- Developed a resilient feature for remote system status data preservation, enabling local backup on external computers to safeguard against data loss.

Software Engineer Intern | Centrifuge — **May 2023 – August 2023**
- Developed a real-time image recognition system using Python and YOLOv8 to classify objects from internet-streamed video feeds, enhancing surveillance capabilities through fast, accurate detection.
- Boosted model accuracy via training on diverse datasets and implemented a PostgreSQL backend to log classifications, timestamps, and confidences for detailed analytics and data integrity.

Web Developer | TDAY Sports — **June 2023 – August 2023**
- Spearheaded the development of a dynamic website for a sports media company, delivering a scalable and responsive online platform to engage a diverse audience.
- Designed and implemented a full-stack web experience using HTML, CSS, JavaScript, and PHP, integrating multimedia content and capturing viewer emails to drive user interaction and support engagement initiatives.

Project Experience

Hokie Electric Vehicle Team | Team Member — **December 2022 – May 2025**
- Working on optimizing a 2023 Cadillac LYRIQ over four years.
- Responsible for the controls of all longitudinal motion of the vehicle, including interfaces with automated features.
- Design and test the propulsion system for the electric vehicle challenge.

HackDown Hackathon | Programmer — **November 2021**
- Engineered an innovative multi-purpose environmental control system to regulate confined and extraterrestrial habitats, featuring sensor integration and a user-centric interactive website for real-time adjustments.
- Awards: Best Sustainability Hack and Best Space App sponsored by Space Force.

Leadership

Vice President | Delta Chi Fraternity — **September 2024 – Present**
- Responsible for managing 15 chairman positions and helping them accomplish their responsibilities.
- Developed a mentor program for our new members which increased new member GPA by over 120%.
- Oversees a chapter of 100+ members.

Director of Philanthropy | Delta Chi Fraternity — **December 2023 – September 2024**
- Raised over $15K in 3 days for cancer research.
- Responsible for planning events and generating participation from other organizations on campus.