Trenton Gray

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OBJECTIVE
Seeking a computer engineering internship for the summer of 2025. Exemplifies Aggie core values of leadership, integrity, and selfless service.

EDUCATION
Texas A&M University, College Station, Texas   May 2026
Bachelor of Science in Computer Engineering
Cumulative GPR: 3.86

WORK EXPERIENCE
Texas A&M High Performance Research Computing, College Station, TX   Sept. 2023 – Oct. 2024
Student Technician (Jan. 2024 – Oct. 2024)
- Ensured satisfaction for 2,500 users through a response ticketing system by proactive communication.
- Resolved user difficulties for 1,500+ software packages through teamwork and problem solving.
- Assessed solution difficulty of incoming tickets then delegated to the proper staff of 25 people.

Student Assistant for HPC Research (Sept. 2023 – Oct. 2024)
- Coordinated and executed research events for the purpose of department income and platforming.
- Developed affordable financial decisions while under tight event budgets.
- Maintained a precise knowledge of inventory for the efficiency of the HPC department.

PROJECTS
ARMv8 Single Cycle Processor Unit, *Verilog*   Oct. 2024
- Designed and implemented a single-cycle processor in Verilog to execute core ARMv8 instructions, including LDUR, STUR, ADD, SUB, AND, OR, and branch operations.
- Developed test modules to verify functionality and ensure accurate execution of all operations within a single clock cycle.

Aggie Shell: Custom Linux Command-Line Interface with IPC and I/O Redirection, *C++*   Oct. 2024
- Developed a custom Linux shell, Aggie Shell, to emulate core Bash functionalities, including command execution using exec() system calls, interprocess communication, and file input/output redirection.
- Implemented support for navigation commands and concurrent child process management, enabling seamless execution of standard Linux commands.

ECG Data Transmission Client-Server System Using Named Pipes, *C++*   Sept. 2024
- Designed and implemented a client-server system for ECG data transmission using named pipes in Linux.
- Developed a client application to interact with the server's API, enabling retrieval of individual ECG data points and complete raw files in segments.
- Implemented a custom communication protocol to ensure accurate and efficient data exchange between client and server.

VOLUNTEER WORK
Big Event, Team Leader   Mar. 2023, Mar. 2024
- Led a team of volunteers, assigning tasks and ensuring successful labor for the given community member.
- Determined project requirements through follow up conversation in case of changed requirements.

AWARDS/HONORS
Presented Engaging Secondary Students in Computing and Cybersecurity at PEARC24   Jul. 2024
Published by Association for Computing Machinery (ACM)
- Analyzed common sources of engagement in activities at a secondary education cybersecurity summer camp
- Received "Best Paper: Workforce Development & Training, Student Short Paper"

Co-Author of Project-Based Learning in K12 Cybersecurity Education   Nov. 2024
Published by the Colloquium for Information Systems Security Education (CISSE)
- Evaluated effectiveness of PBL implementations in various cybersecurity educational activities

Co-Author of Spatial Reasoning Development in the K12 Environment   Oct. 2024
Published by IEEE – Presented at Frontiers in Education Conference 2023 (FIE)
- Examined the effect of various spatial activities, such as origami or drone flying, to determine impact on spatial ability

SKILLS
Linux; C++; Verilog; Python; Git; Public Speaking; Communication; Leadership