Tyler Henry

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Experience

F-16 RADAR Software Engineer *Dec. 2024 - Present*

Air Force, Hill AFB, UT - *Secret Clearance*

- Working on a large-scale, real-time, safety-critical system to support ongoing updates, additions, and fixes.
- Developed a program to remove the team's dependency on multiple operating systems, custom tools, and an out-of-date version control system to well-supported, flexible software.

Computer Science Intern (RADAR) *Apr. 2024 - Dec. 2024*

Air Force, Hill AFB, UT

- Led the development of a drone-mounted Ground Penetrating Radar (GPR) system, integrating a Software Defined Radio (SDR) and custom signal processing algorithms, which achieved an 80x reduction in system cost compared to existing methods.
- Served as the primary software developer for the GPR system, contributing to a Master's Degree research project focused on innovative explosive device detection.
- Developed and integrated software for seamless communication between ground station and drone-mounted systems, enabling real-time wireless exchange of commands and signal data.

Computer Science Intern (PERN Web Dev) *Jul. 2023 - Apr. 2024*

Air Force, Hill AFB, UT

- Developed a website with the PERN stack to host trainings, information, and forms that were previously done on paper, saving administrators 15 hours a week.
- Added complex site features to allow employees and operators to submit, maintain, and fulfill project-critical 3D print requests.

Manufacturing Engineering Intern *Jan. 2021 - Apr. 2023*

Blendtec, Orem, UT

- Designed and tested new assembly aids and tools using Solidworks and microcontrollers to update and revise assembly processes.
- Planned, formulated, and oversaw the fabrication of updated assembly lines, doubling the output potential of production teams

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Education

Bachelor of Science, Computer Science *Dec. 2024*

Utah Valley University

- Magna Cum Laude
- Developed a computer vision program that processed drone-captured aerial images to identify their corresponding locations in satellite imagery, allowing accurate navigation in GNSS-denied environments.
- Created a GPS spoofing detection system in Rust for embedded Linux devices, leveraging existing IMU and GPS modules on drones to enhance security.

Associates of Science, Computer Science *May 2023*

Technical Skills

- Rust
- C/C++
- Python
- Full-Stack Web Dev

- Digital Signal Processing
- Embedded Development
- Software Defined Radio
- Solidworks (CSWA)

- Nix
- Linux
- Git
- Drone Design

For more information and projects, please visit my portfolio website at tylrhnry.github.io