Alexander L. Freel

freelal@rose-hulman.edu
freelalex12@gmail.com
(703)-851-6418

Education: **Bachelor of Science, Computer Engineering** **May 2027**
Rose-Hulman Institute of Technology, Terre Haute, IN **GPA: 3.04**
Related Courses: DC Circuits, AC Circuits, Signal Processing, Embedded Systems, Digital Systems, Continuous Time Signals and Systems, Electronic Device Modeling, Object Oriented Software Development, Data Structures, Computer Architecture.

Skills: **Software:** Java, HTML, CSS, Python, C, Verilog
Systems: Windows, Macintosh, Linux
Hardware: MSP432 Microcontroller, Oscilloscope, Logic Analyzer

Experience: *Cybersecurity & Systems Intern — Edelman Financial Engines* **June – August 2025**

- Supported vulnerability management by identifying, assessing, and documenting system weaknesses, contributing to improved organizational security posture
- Applied and verified critical security updates and patches, including Samba configurations and Windows BitLocker encryption policies, ensuring compliance with best practices
- Collaborated with IT team members to develop and implement system hardening strategies, enhancing infrastructure resilience and mitigating risks across enterprise systems

Freelance Website Design **June – August 2024**

- Built personal website to secure design contracts, using HTML, CSS, and JavaScript
- Designed responsive, user-friendly sites with intuitive interfaces and engaging visuals
- Created animations and interactive effects to enhance user experience

Projects: *ECE Team Project* **2023 – 2025**

- Implemented photoresistor, line sensor, and IR sensor to learn how to automate a robot's movement on a track
- Helped develop C code for the software that guided the robot sensors

Coding Game from Scratch in Java: (Bonfire)

- Coded enemy tracking movement, collisions, an automated scoring system, and hero movement
- Used Refactoring and Interfaces in order to have code that reflects polymorphism
- Learned how to use try and catch blocks for exception handling in order to keep the program running even if there are errors

Coding Game from Scratch in Python: (Worlds Hardest Game Replica)

- Coded boundaries, Coins, player movement, obstacles, and interactions
- Practiced using coding techniques and organization that optimized the game

Virtual Machine

- Took steps in learning the art of virtualization
- Created a virtual machine using VMware that allowed me to access a fully functional Linux Computer from my current windows computer

Digital Systems Lab Projects

- Programmed MSP432 microcontroller to interface with LCD, servo, and stepper motors.
- Developed RISC-V assembly programs for algorithms such as Fibonacci & array manipulation
- Implemented Butterworth and Chebyshev filters in MATLAB for signal analysis.
- Designed UART-based communication protocols for peripheral control