

Sean Schlieff

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EDUCATION

University of Georgia | *Magna Cum Laude*

Athens, GA

Bachelor of Science in Computer Systems Engineering, Minor in Computer Science

Aug. 2021 – May 2024

EXPERIENCE

Energy Management Systems Intern

May 2023 – July 2023

Southern Company

Atlanta, GA

- Assisted in the replacement of existing Citrix infrastructure, focusing on hardware installation, including RapidNet and fiber
- Created a script in BASH that would confirm the reporting accuracy of an application Discovery
- Provisioned and configured workstations for the Spectrum network, ensuring hardware compatibility
- Diagnosed and fixed RAID 1 disk configurations to enhance system reliability

FC Associate

August 2022 – January 2023

MGE5 Amazon Sortation Warehouse

Jefferson, GA

- Worked the NIT Sort flex shift
- Operated material handling equipment such as pallet jacks to stage pallets for outbound shipping
- Sorted boxes and jiffies to their appropriate lanes to ensure a smooth sorting process
- Ensured the structural integrity of shipments by wrapping pallets with shrink wrap for safe transportation

PROJECTS

Custom LED Lighting System | *C++, PCB Design, Embedded Systems*

August 2024 – September 2024

- Designed a custom LED lighting system for a home entertainment den
- Engineered an "LED remote" using tactile push buttons, integrating with two ESP32 Huzzah units via Bluetooth
- Integrated a 3.3V to 5V converter, Arduino Uno, and power management for high-powered LEDs
- Designed and assembled a custom PCB to interface hardware components, optimizing space and functionality

Motion Simulation Chair | *Embedded Systems, Electrical Engineering, C++*

January 2024 - May 2024

- Collaborated with engineers to design and build a motion simulation chair
- Developed the electrical control system, including wiring, motor selection, and integration
- Programmed the motion control in C++ using FastAccelStepper to enable pitch, roll, and yaw movement
- Created a GitHub repository with an in-depth README, detailed project documentation, and an MIT license
- Created multiple user-controlled modes, including full-motion and roller coaster simulations

8-Bit Computer | *Digital Logic, Memory Design, Timing Analysis*

June 2024 – Present

- Built a bi-stable 555 timer clock to control data transfer pulses, allowing manual or automatic control via hardware
- Designed an 8-bit ALU and a 16-byte by 8-bit static RAM module, focusing on hardware-driven operations for data storage and computation

Pill Bottle Clock | *C++, Signal Processing, Embedded Systems*

September 2022 – November 2022

- Developed a smart pill bottle with an integrated clock using an LCD
- Implemented sensor fusion from LDR, PIR, and FSR sensors, designing signal conditioning circuits using non-inverting op-amps for voltage control
- Programmed and interfaced with hardware using Arduino to display sensor data on the LCD

Personal Keyboards | *Soldering, VIA*

August 2021

- Built two different keyboards for personal use
- Used VIA software to implement the correct ANSI keyboard layout and map key positions
- Soldered switches to fulfill continuity between switch pins and PCB solder joints

TECHNICAL SKILLS

Languages: Java, Python, C/C++, VHDL, Verilog, Assembly, JavaScript, HTML/CSS

Hardware/Embedded Systems: ESP32, Arduino, Raspberry Pi, FPGAs, Digital Logic, PCB Design, Circuit Design

Software/Tools: EasyEDA, KiCAD, Multisim, Simulink, MATLAB, Eclipse, Git, VSCode, PyCharm, VIA

Communication/Protocols: I2C, UART, SPI, Bluetooth, Ethernet, Wi-Fi, SSH