# Sean Schlief

770-912-5869 | sean.schlief01@gmail.com | linkedin.com/in/sms01 | github.com/seanschlief01

## 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
- Selected and integrated NEMA 34 9Nm stepper motors, CL86T drivers, and 350W power supplies for torque, efficiency, and reliability
- Calculated motor performance metrics, including torque curves, gearbox reduction (5:1), and RPM limits for smooth motion control
- Sized and sourced power components to meet ampacity and deliver 1050W system power
- Programmed motion control in C++ using FastAccelStepper for pitch, roll, and yaw

**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, WiFi, SSH