

# Sean Schlief

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## EDUCATION & LICENSURE

**University of Georgia** | *Magna Cum Laude*

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

August 2021 – May 2024

Athens, GA

- **Relevant Coursework:** Circuit Analysis, Electronics I, Embedded Systems I & II, and Advanced Digital Design

**Engineer in Training (EIT), Electrical and Computer**

August 2025

*Georgia Board of Professional Engineers*

## 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

**Window Cleaner**

November 2019 – Present

*Crystal Clear Cleaning*

Atlanta, GA

- Clean windows for commercial and residential properties throughout downtown Atlanta
- Prepare equipment and safely use ladders and cleaning tools at various heights
- Ensure high-quality, streak-free finishes while following safety protocols
- Communicate with clients to confirm satisfaction and address special requests

## PROJECTS

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

August 2024 – September 2024

- Designed and assembled a custom PCB integrating ESP32 microcontrollers, Arduino Uno, and power distribution for LED control
- Implemented Bluetooth communication between ESP32 modules, enabling wireless handheld remote to control lighting modes
- Integrated 3.3V-5V level conversion and a 20A power supply for reliable operation of high-power LEDs

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

January 2024 - May 2024

- Collaborated with engineers to design and build a motion simulation chair
- Designed and built 3-DOF motion chair integrating NEMA 34 stepper motors, CL86T drivers, and 350W power supplies
- Performed torque curve analysis, gearbox sizing (5:1 reduction), and power budgeting for a 1050W system
- Programmed motion control in C++ with FastAccelStepper to coordinate pitch, roll, and yaw movements

**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** | *Signal Processing, Embedded Systems, C++*

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