

Charles Phillips

Software Engineer in Atlanta, Georgia

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Job Experience:

Software Engineering Co-Op*: Polytron

Duluth, GA / Jan 2023–Present

*alternating semesters with school

- Creating software tools to automate internal & client/project tasks
- Assisting IT department
- On-site client/project assistance mainly installing testing PLC hardware
- Working internally with EEs to ensure software and hardware cohesion for customers

Warehouse Associate: Ethos Dynamics

Suwannee, GA / Nov 2019 – Jul 2024

- Testing, Refurbishing, & repairing networking equipment
- Receiving, packing & shipping orders; managing company eBay account

Area Manager: AMS Pools

Suwannee, GA / May 2019 – Oct 2022

- Automating management spreadsheet tasks
- Managing 10+ facilities & 80+ employees

Skills (no particular order):

Programming

- Java, Rust, C/C++, Python, JS, VHDL
- Git, Arduino, Docker, ESP32, Intel Quartus, various PLC vendors

IT

- PC building/repair, Linux(es), GNU tools, QEMU, Docker, self managed NAS & local personal servers

Multimedia

- Music production, sound design, sampling, drums.
- Photo & Video editing; DSLR & cinema camera operation. Professionally on occasion.

Other

- Soldering & 3D printing for Device Prototyping & Electronics repair
- OpenSCAD, FreeCAD, AutoCAD, & Inventor
- MS office VBA & Office Script

Education:

Georgia Institute of Technology

Atlanta, GA / B.S. Computer Science (in progress)

Graduation: Dec, 2025

Specialization – Devices & Systems Architecture:

- Software design and programming
- Computer organization & architecture
- **Courses:** Perception & Robotics, Systems & Networking, Git & Agile development, Capstone/Junior Design, Compilers & Interpreters, Operating Systems

In Progress: Advanced OS, Processor Design, Embedded System Design

Projects – Also see my [GitHub](#) | [Music](#):

Packing Robot Job Manager - Polytron:

- A client approached the company saying the sole maintainer for this software had passed rendering the Java source inaccessible. I was assigned to reverse engineer the JAR, hunt down it's ancient & abandoned-ware dependencies (& reverse engineer one to remove DRM). From there a few major bug fixes and new features were implemented as specified by a senior engineer who met with the client.

Ladder Logic Translator - Polytron

- CLI tool for migrating ladder logic code from Siemens TIA 13 to Rockwell Control Logix using their respective XML formats. Written in Java with a team of 3.

Citrix Sharefile Automation - Polytron

- GUI tool for mass file modification on Citrix's Sharefile platform using their API. Written in Java using multi-threading & swing. This was distributed to the office management team for internal use.

Redox OS System Monitor (GT Junior Design):

- For Junior Design at GT we work with a semi-randomly assigned team & project to build. We are building a program to manage system services in Redox OS similar to systemd for Linux.

Additional projects, & references available upon request.

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