

# Ian Hopkins

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## EXPERIENCE

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### Shermco

Jun. 2024 – Aug. 2024

*Electrical Test & Field Service Engineer*

*Minooka, IL*

- Designed efficient testing procedures with accordance to ANSI/NETA ATS to evaluate the integrity of power system components – like circuit breakers, instrument transformers, relays, etc – by measuring insulation resistance, dielectric absorption ratios, turn ratios, and more
- Formulated ideal settings for Siemens & Eaton 3-pole circuit breakers, **significantly improving test time**
- **Documented test results** using PowerDB for **~500 components** throughout internship

### ECE 220 Course Staff

Jan. 2024 – Present

*Course Assistant*

*Champaign, IL, @UIUC*

- Hold office hours and assist during lab sections for Computer Systems and Programming – an introductory course for Assembly & C taken by over **400 ECE students** semesterly

### George School Learning Center

Sep. 2020 – May. 2022

*Math and Sciences Tutor*

*Newton, PA*

- Employed by the school to provide tutoring regarding mathematics and the sciences during the study hall period of the day for both recurring students and walk-in appointments.

## PERSONAL PROJECTS

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- **FACTORIZE, a game for the Urbana Board** (C & System Verilog) **May. 2024**
  - Engineered an adaptable FSM to support mining, refining, transporting, and selling of ores
  - Managed communication between on board computer and custom hardware architecture to integrate parallelized ore computation with user input to streamline gameplay
  - Designed hardware support of HDMI and USB Keyboard for UI/UX
  - **Showcased as one of the top projects of the semester**
- **ILLINIX, a Linux-like Operating System** (C & x86 Assembly) **Dec. 2023**
  - Managed system resources by virtualizing memory and creating a scheduler
  - Implemented system calls and various handlers to read from custom filesystem, support I/O devices, provide protection, and coordinate up to 6 concurrently running tasks
  - Lead a group of 3 other students to complete this project
- **Extension of 5000+ line 'Adventure Game'** (C & x86 Assembly) **Oct. 2023**
  - Developed additional VGA graphical features and support for a serial device
  - Focused on device interaction, data manipulation, mutex usage
  - Managed user/kernel boundary interactions while working on large codebase

## EDUCATION

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### University Of Illinois at Urbana-Champaign

Sep. 2022 - May. 2025

**B.S. Computer Engineering**

*Urbana-Champaign, IL*

- GPA: **3.98**
- Relevant Coursework: Data Structures & Algorithms, Operating Systems, Control Systems, Optimization, Digital Systems (FPGA), Analog Signal Processing

## SKILLS

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- **Skills:** Experienced in **System Verilog, x86 Assembly, C, C++, & Java** programming. Working knowledge of version control systems like **git**. Strong Communication and Time Management skills