

Joel Abraham

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EDUCATION

Drexel University, College of Engineering
Bachelor of Science in Computer Engineering
Bachelor of Science in Electrical Engineering

Philadelphia, PA

SKILLS

- Technical: Cadence, Synopsys, SPICE, C, MATLAB, VHDL, Verilog, Assembly, Wireshark, Rockwell Automation (Studio 5000, FactoryTalk), SOLIDWORKS, ModelSim, Simulink
- Certifications: Construction OSHA 10, General Industry OSHA 10, Fundamentals of Industrial Networking

EXPERIENCE

Physical Design Engineer — Charge Recovery Logic (Senior Design Project) Sept 2025 - Present

Drexel University

- Designing transistor-level circuits in Cadence for charge recovery logic using adiabatic design techniques.
- Developing and simulating custom CMOS circuits intended for integration within a RISC-V processor architecture.
- Supporting RTL and logic development to ensure compatibility between circuit-level designs and system-level constraints.

Control Systems Engineer Sept 2024 - Apr 2025
Thermo Systems LLC Fort Washington, PA

- Led and implemented 30+ control system projects across various stages of development, serving as engineer, product manager, designer, and budget analyst.
- Managed acceptance testing for newly built and installed control panels, ensuring full functionality and reducing testing time by 33% while maintaining quality standards.
- Designed, updated, and implemented HMI applications and SCADA systems for new and existing operations, collaborating with operators to capture system requirements.
- Maintained documentation and provided risk assessments for new business proposals, while tracking and updating financial records to stay within project budgets.

Network Engineer Sept 2022 - Apr 2023
Naval Sea Systems Command Philadelphia, PA

- Implemented, installed, and tested network upgrades for active U.S. naval ships, including LSD, LHD, LHA, CVN, and CVL classes.
- Configured switches, VLANs, and ports, and verified new network connections aboard vessels and in laboratory environments.
- Utilized Wireshark, traffic generators, and Spanning Tree Protocol (STP) to evaluate network performance for load, latency, throughput, routing, and packet loss.

LEADERSHIP

Intramural Volleyball Captain
Community Service Director of Society of Asian Scientists and Engineers

Apr 2023 - Present
June 2022 - June 2023