

# Jack B. Gladowsky

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## Education

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### Bachelor of Science, Computer Engineering (Minor: Computer Science)

Northeastern University, Boston, MA

May 2025

Relevant Coursework: Embedded Design, Computing Fundamentals, Digital Design, Circuits and Signals, Physics 1 and 2, Differential Equations.

## Engineering Work Experience

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### Quality Engineering Co-op

January 2023 – August 2023

Lumicell Inc, Newton, MA

- Collaborated with cross-functional team on software development life cycle, assisting with deliverables to support an on-time FDA submission.
- Authored and executed 14 software validation protocols to validate 17 user needs for 4 different software applications and wrote corresponding software validation reports.
- Conducted and analyzed reprocessing usability sessions to verify safety and effectiveness of workflow. Gathered feedback from 5 intended users and assessed subsequent product updates to improve user experience.
- Executed and analyzed hardware test method validation protocols in response to FDA findings, resulting in a 30% more accurate and reproducible test method.

### Technical Founder

January 2023 - Present

SmartSoles, Boston, MA

- Engineered a custom PCB around a Nordic microcontroller (nRF52 Series), enhancing pressure sensing capabilities of custom insole sensor.
- Designed PCB schematic integrating an Inertial Measurement Unit (IMU), Micro-USB, MicroSD, power filtering, and power switching based on input. Created a custom PCB layout using schematic.
- Conducted testing of nRF52 Development Kit power consumption during various states such as Bluetooth Low Energy transmission and data collection to estimate final product battery life.

### Electrical Project Lead

September 2022 – June 2023

3D Printed 3D Printer, Boston, MA

- Led group of 3 to set up custom 3D printer wiring, integrated motherboard with stepper motors, hot end, end stops.
- Developed custom Marlin firmware configuration to utilize all features of 3D printer.
- Performed testing on 3D printer electrical systems to verify and validate all components work as expected.

## Skills

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Programming: Python, C++, C, Arduino, STM32Cube, Bluetooth & Bluetooth Low Energy (BLE), MATLAB, Git.

Platforms: Windows, Linux (Ubuntu), MacOS, Raspberry Pi, Microcontroller (nRF52, STM32, ESP32, ATmega328P).

Hardware: FPGAs, 3D Printers (FDM and Resin), Oscilloscope.

Software: VSCode (PlatformIO), Terminal, KiCAD, Altium, Quartus Prime, SolidWorks, Quality Management Systems, Requirements Management Systems, GitHub, Jira, MS Office.

## Projects

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### FPGA Robot Arm, Embedded Design Course Project

September 2022 - December 2022

- Designed a custom FPGA schematic leveraging logic blocks to program the Cyclone V SoC controlled robotic arm.
- Implemented Pulse Width Modulation (PWM) using logic blocks to control servo motors in 5 DOF (degree of freedom) robotic arm.
- Created a system for users to manually control robotic arm or set beginning and end point for arm to automatically move between using 5 buttons and 4 switches.

## Leadership

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### Lab Manager, Club Leadership

September 2022 – June 2023

Northeastern Robotics Club, Boston, MA

- Managed shared lab space for 10 projects. Maintained 10 3D printers shared between club. Organized tools and components for projects to use in the lab space.