

Joel R. Berinstein

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EDUCATION

Vanderbilt University, School of Engineering | Nashville, TN

May 2026

Electrical and Computer Engineering, Engineering Management, and Computer Science Minor

- GPA: 3.728 | Dean's List Recipient
- Coursework: Microcontrollers, Semiconductor Circuits, Analog Circuits, FPGA Design, Data Structures, Project Management, Organizational Behavior

SKILLS

Technical: Altium, SolidWorks, LTSpice, AutoCAD, HAM Radio Technician, Quartus, Microsoft 365

Programming: C++, Python, Java, Verilog and VHDL, ARM and AVR Assembly, MatLab, Javascript, HTML

Languages: Basic Mandarin (Conversational and Written)

PROFESSIONAL EXPERIENCE

Belcan | Cincinnati, OH

May 2025 - August 2025

Systems Engineering Intern

- Designed and constructed a drone from the ground up alongside a team of 2 interns to autonomously image a user-specified target in a low-light, GPS-denied environment
- Followed model-based systems engineering practices within MSOSA to translate stakeholder needs into requirements, logical and physical architectures, an electrical model, and validation cases

Electrical and Computer Engineering Department | Nashville, TN

August 2024 - Present

Technical Support Crew Member

- Proctor 2 laboratory sessions with 16 students each for Semiconductor Circuits course, ensuring students master circuits concepts, electrical prototyping tools, and use of components
- Mentored personal projects involving Arduino and PCB design during weekly makerspace sessions

Dong Robotics Lab | Vanderbilt Institute of Surgical Engineering | Nashville, TN *August 2023 - April 2024*

Research Assistant

- Designed, fabricated, and programmed custom microcontroller PCB circuits in C++ using 32-bit ARM nRF chips to gather and transmit data from within capsule sensor device
- Employed Arduino programmed circuitry components to characterize medical robots with MatLab analysis

PROJECT EXPERIENCE

FPGA Course | Vanderbilt University | Nashville, TN

January 2024 - May 2024

VHDL Programmer

- Programmed Intel DE1-SoC FPGA board with state machines, audio output, and dynamic VGA display using VHDL and Quartus designer
- Envisioned and assembled a piano tiles game demo using FPGA board and VGA monitor to challenge user to achieve a high score

Boy Scouts of America Troop 773 | Potomac, MD

September 2018 - June 2022

Eagle Scout

- Conceptualized personal community service project, fundraised with community leaders, and led 20+ volunteers in the assembly of over 300 veteran care packages for the DC Veterans Affairs Hospital to achieve Eagle Scout
- Assisted with planning weekly troop meetings, and camping trips in a troop with 50+ scouts
- Organized and instructed patrols of 8 scouts ages 12 to 15 on overnight events