Jordan S. Spencer

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EDUCATION

Northeastern University, College of Engineering Boston, MA | ***May. 2026***
Candidate for BS in Mechanical Engineering, PlusOne Candidate for MSME with concentration in Mechatronics (GPA: 3.9)
Honors: *Northeastern University Honors Program, Dean's List, Triple Jump Silver Medalist at CAA D1 Conference Meet*
Courses: Material Science, Mechanics of Materials, Electrical Engineering, Dynamics, Fluids, Heat Transfer, Control Systems
Activities: NCAA D1 Men's Track and Field, Generate, Northeastern Black Athlete Caucus, Northeastern Society of Black Engineers, Roxbury Robotics, American Society of Mechanical Engineers, First Year Engineering Makerspace Mentor

SKILLS

Technical: SOLIDWORKS (CSWP, AM, FEA), C++, MATLAB, Python, Adobe Suite, Microsoft Suite, Autodesk Suite, Raspberry Pi, Arduino, Onshape CAD Software, Fusion 360, Power Tools, Sketching, 3D Printing, Technical Writing and Documentation, Basic Automotive Repair, Soldering, PCB design, Prototyping, Conceptualization, Carpentry, Construction, CNC Routing, Laser Cutting

LEADERSHIP & EXPERIENCE

SharkNinja Mechanical Engineering Co-op - *Systems Team* Needham, MA | ***Jul. 2024 – Dec.2024***
- Utilized SOLIDWORKS (Part Modelling and Assembly) to design custom 3D printed fixtures, 80/20 test rigs, and product prototypes that improved the accuracy and speed of test
- Hosted design reviews and prepared weekly presentations to be shared with both domestic and international teams
- Analyzed components using KEYENCE microscopes and Microsoft Excel to verify testing results and observations
- Optimized the performance of high-pressure, suction, and motorized products across both Shark and Ninja and assessed tradeoffs

Northeastern University College of Engineering Red Vest - *Engineering Mentor* Boston, MA | ***Jan. 2024 - Present***
- Mentored hundreds of engineering students weekly, helping them to complete homework assignments and projects
- Oversaw the makerspace, model shop, and fabrication lab communicating with a team of students and staff members
- Operated machinery, used power tools, and instructed students in proper tool usage

Generate (Engineering Entrepreneurship Club) - *Mechanical Engineer* Boston, MA | ***Sept. 2024 – Dec. 2024***
- Collaborated seamlessly with a client and diverse team to design and manufacture a modular VR controller that replicates the physical reactions of a chosen tool for a deeply immersive virtual experience using an ESP32, custom PCBs, and Onshape

Forge (Engineering Entrepreneurship Club) - *Product Lab Member* Boston, MA | ***Dec. 2023 – Apr. 2024***
- Ideated in the product design lab, collaborating seamlessly with a diverse team of engineering and business students to contribute to innovative solutions that will impact the current market for consumer goods
- Designed HUD Ski Goggles with infrared thermal cameras utilizing ESP32 and Onshape

PROJECTS

Tabletop Arcade Machine - *Project Lead* Boston, MA | ***Mar. 2025 - Apr. 2025***
- Designed and assembled an arcade cabinet, utilizing Adobe Illustrator and Fusion 360, employing CNC, laser cutting, and 3D printing techniques to fabricate and assemble components
- Orchestrated the integration of a Raspberry Pi 5 to assemble the operating system seamlessly, alongside various electronic peripherals including buttons, speakers, and screens to achieve fluid communication between components
- Optimized the software and hardware cohesion, troubleshooting issues regarding the Linux-based operating system; RetroPie

IR Transmitter and Receiver - *Project Lead* Boston, MA | ***Nov. 2023 – Dec. 2023***
- Designed an Infrared Transmitter and Receiver using op-amps, resistors, transistors, and circuit analysis methods
- Constructed high-pass, band-pass, and low-pass filters, matching the expected frequency of the receiver with that of the transmitter, inducing a response in the receiver from more than 15 feet from the transmitter

Stealth Planes Detection Museum Exhibit - *Project Lead* Boston, MA | ***Nov. 2022 - Dec. 2022***
- Led design initiative for a museum exhibit focused on educating children about engineering concepts, employing a strategic combination of Arduino, MATLAB, SOLIDWORKS, and laser-cutting to create an interactive showcase
- Detected the placement of planes with 100% accuracy and dynamically displayed their coordinates on a radar interface, enhancing the educational experience

Portable Charging 3DS Dock - *Project Lead* Yaphank, NY | ***Jul. 2023 – Aug. 2023***
- Modified the 3DS charging Dock to add portable charging by connecting a TP4056 Lithium-Ion Battery Charger, TM3608 Buck Converter, and a Lithium-Ion battery to the charging terminals to support simultaneous charging while playing

Brookhaven National Laboratory - *Student Researcher* Brookhaven, NY | ***Jul. 2021 – Dec. 2021***
- Researched the implementation of Quantum Algorithms leading to proof of quantum supremacy by orders of magnitude
- Analyzed and wrote Quantum Algorithms leveraging matrix math, Python, and QISKIT

Eagle Scout Project – *Project Lead* Yaphank, NY | ***Oct. 2021 – Jan. 2022***
- Spearheaded the design and construction of handicap-accessible picnic tables and benches at the Swezey Avey House utilizing Fusion 360 and Microsoft Excel, enhancing the comfort and accessibility for U.S. Veterans and their families