

Andrew Cohen - Electrical Engineer

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EDUCATION

Tufts University, Electrical Engineering <i>summa cum laude</i>	Class of 2025
<ul style="list-style-type: none">• 1590 SAT, 3.9 GPA• National Merit Scholar, Tufts Summer Scholar, Minor in Music Engineering	

EXPERIENCE

Teaching Assistant, Tufts University	Medford MA, 9/23–12/24
<ul style="list-style-type: none">• Built coursework in circuit design, debugging practices, digital logic, and VHDL• Directed lab sections, held office hours, and graded assignments for class of 50+ students	
Intern, RTX BBN Technologies	Cambridge MA, 5/24–8/24
<ul style="list-style-type: none">• Developed sFPDP transceiver SoM with Altera FPGA processor in both C and VHDL• Designed and performed experiments with optic fiber sensing setup on optic table• Performed noise analysis of optical and RF systems in multi-component laser heterodyning setup	
Researcher, Mohanty Nanophotonics Lab	Medford MA, 3/22–8/23
<ul style="list-style-type: none">• Managed \$5000 grant for photonics research with biomedical applications• Analyzed novel control methods with sub 5um footprints to produce light-based neural probes• Presented weekly slide decks to team of PhDs and researchers to track progress• Showcased final design as panelist and presenter at the Summer Scholar's annual conference	
Barista, Caffé Nero	Concord MA, 4/21–8/21
<ul style="list-style-type: none">• Ran the coffee bar and learned valuable foam management skills	
Analog Design Intern, Analog Circuit Works	Sudbury MA, 5/19–8/20
<ul style="list-style-type: none">• Produced design documentation and verification for high-volume consumer ASICs• Established foundational circuitry skills: soldering, PCB design, debugging	

EXTRACURRICULAR

IEEE and IEEE-Eta Kappa Nu	Medford, MA, 2022–2025
<ul style="list-style-type: none">• Senior Class Representative and Music Engineering Chair• Provide pre-professional workshops, speakers, and other resources to Tufts' student engineers	
Drumming	10+ years
<ul style="list-style-type: none">• BEATs Street Drumming Group: perform original compositions on buckets, used plastics, etc.• Independent rock/jazz drummer, perform for campus events and around Medford	

PROJECTS

<u>Machine Vision on Budget FPGA</u>	May 2025
<ul style="list-style-type: none">• Low-power image classification with cheap chip and camera for educational purposes	
<u>Optical Waveguide Superposition Controller</u>	April 2025
<ul style="list-style-type: none">• Published Optics Express paper on novel theory for nanoscale optical beam steering	
<u>Audiovisual MIDI Air Hockey</u>	Dec 2024
<ul style="list-style-type: none">• Custom-built MIDI controller with sensors, LEDs, and Bluetooth for mixed media fun	
<u>Smack Buds: A VHDL Fighting Game</u>	Dec 2022
<ul style="list-style-type: none">• Retro-style fighting game on Upduino FPGA written entirely in VHDL	

SKILLS: Extensive coding experience (C, C++, Java, Python, MATLAB); FPGAs; Embedded systems; Optics; Communication protocols (SPI, I2C); Signal processing; Music engineering; Machine learning; Technical writing and communication; Spanish