

## Andrew Cohen - Electrical Engineer

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### EDUCATION

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**Tufts University, Electrical Engineering *summa cum laude*** ***Class of 2025***  
• 1590 SAT, 3.9 GPA  
• National Merit Scholar, Tufts Summer Scholar, Minor in Music Engineering

### EXPERIENCE

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**Teaching Assistant, Tufts University** **Medford MA, 9/23–12/24**  
• 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**  
• 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**  
• 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, Caff  Nero** **Concord MA, 4/21–8/21**  
• Ran the coffee bar and learned valuable foam management skills

**Analog Design Intern, Analog Circuit Works** **Sudbury MA, 5/19–8/20**  
• Produced design documentation and verification for high-volume consumer ASICs  
• Established foundational circuitry skills: soldering, PCB design, debugging

### EXTRACURRICULAR

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**IEEE and IEEE-Eta Kappa Nu** **Medford, MA, 2022-2025**  
• Senior Class Representative and Music Engineering Chair  
• Provide pre-professional workshops, speakers, and other resources to Tufts' student engineers

**Drumming** **10+ years**  
• BEATs Street Drumming Group: perform original compositions on buckets, used plastics, etc.  
• Independent rock/jazz drummer, perform for campus events and around Medford

### PROJECTS

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[Machine Vision on Budget FPGA](#) **May 2025**  
• Low-power image classification with cheap chip and camera for educational purposes  
[Optical Waveguide Superposition Controller](#) **April 2025**  
• Published Optics Express paper on novel theory for nanoscale optical beam steering  
[Audiovisual MIDI Air Hockey](#) **Dec 2024**  
• Custom-built MIDI controller with sensors, LEDs, and Bluetooth for mixed media fun  
[Smack Buds: A VHDL Fighting Game](#) **Dec 2022**  
• 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