Andrew Cohen - Electrical Engineer

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EDUCATION

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

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, Caffé 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

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

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