Thomas Coor

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Objective

Electrical engineer and interdisciplinary designer with experience in consumer electronics, embedded systems, prototyping, and digital fabrication. Interested in developing sustainable, repairable, and open-source technologies through accessible manufacturing and community-driven design.

Education

The Cooper Union for the Advancement of Science and Art, New York, NY Graduated May 2024
B.E. Electrical and Computer Engineering

Relevant Courses

Digital Signal Processing, Electronics, Comm. Theory, Speech Processing, Arch. Acoustics, Mech. Vibrations

Work Experience

Deckhand, *Hudson River Sloop Clearwater*, Hudson River, NY May - July 2026
Learned and performed sailing tasks, led engine, hull, and rigging maintenance, taught environmental programs, and cooked for the crew on *America's Environmental Flagship*, built in 1969 by Pete Seeger to raise awareness for pollution in the Hudson River. Crew is trained as mechanics to keep the traditional wooden ship floating.

Acoustics Systems Engineer, Frontier Audio Labs, Chicago, IL February 2025 - April 2026
Led acoustics and audio testing at startup during development of next-gen Smart ANC headphones for factory workers. Built and tuned hear-through algorithm and smart limiter. Built and validated prototypes for contracts. Owned acoustic validation during production at fab house in China. Left to pursue other interests.

Acoustic Systems Co-op, Bose Corporation, Framingham, MA Summer-Winter 2024
Designed next-gen calibration scheme and algorithms that enabled users to calibrate the EQ of their soundbar product using a microphone, replacing the current system.

Architectural Acoustics Intern, Threshold Acoustics, LLC, Chicago, IL Summer 2023
Assisted with performing acoustic simulation, building digital audio testbenches, constructing and testing a Dodecahedron speaker, and taking various sound level measurements in performance spaces around Chicago.

Studio Assistant Intern, Andy Cavatorta Studio, Brooklyn, NY Summer 2022
Assistant to artist and engineer Andy Cavatorta in the design and building of audio sculpture titled "The Whale" for the MIT Museum, including sensor calibration, musical tuning, creating custom electronic hardware, and generating music from medieval music and whale songs using a recurrent neural network.

Projects

Mixed-Signal Radio Receiver, Senior Capstone Project Fall 2023-Spring 2024
A HAM radio (14.35 MHz) receiver, including an antenna, Low-Noise Amplifier, IF Mixer, and digital Single-Sideband Demodulator, and speaker.

GPS-enabled Tide Clock, Personal Project Ongoing
Designing a self-contained electronic display for a traditional sailing vessel, integrating GPS, custom PCBs, embedded control, analog clock mechanisms, and LED displays. Developing mechanical components and a serviceable wooden enclosure.

Open-Source ANC Headphones, Personal Project Ongoing
Designing a set of noise-canceling headphones as a test bench for experimenting with sustainable design techniques in consumer electronics.

Awards

Finalist, Guthman Musical Instrument Competition, *Lorentz Violin* 2024
One of 10 finalists for the 2024 Guthman Musical Instrument Competition, the international musical technology competition hosted at Georgia Tech. Designed a novel instrument that uses magnetic disks of varying waveforms that spin over an inductor to generate a current whose frequency is heard as musical pitch. More information can be found here: https://guthman.gatech.edu/

Skills

C, **Python**, MATLAB, **HTML/CSS**, JavaScript, **Woodworking**, Acoustic Test Equipment, **KiCAD**, LTspice, **RHINO**, AutoCAD, **FreeCAD**, Manual/CNC Machining, **Rapid Prototyping**, 3D Printing, LaTeX
