

DESMOND MEHTA

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EDUCATION

Yale University B.S.+M.S., Computer Science	New Haven, CT Sep 2024 — May 2028
• Relevant coursework: Discrete Math, Systems Programming, Compilers, VLSI, Trustworthy Deep Learning	
Cold Spring Harbor High School 4.22 GPA, 1570 SAT	Cold Spring Harbor, NY Sep 2020 — Jun 2024
• Relevant coursework: Linear Algebra, Multivariable Calculus, Physics C, 12× AP 5's	
Columbia University Science Honors Program Weekend coursework in Relativity, Quantum Computing, and Materials Science	New York, NY Sep 2022 — May 2024

WORK

Head of Platform at Sea12 <i>Go, React, Python, Docker, Kubernetes, GCP, Vercel</i> Built and deployed our AI automation platform Led team of 5 interns	New York, NY Apr '25 — Aug '25
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RESEARCH

Asynchronous VLSI & Architecture Group <i>C++, ACT</i> Designing silicon modules for inter-chip communication	Yale University Jan 2025 — Present
Bioelectronics Lab <i>C, C++, MATLAB</i> Improved radio transmission protocol for rodent-implanted neural recording device	Feinstein Institutes for Medical Research Jun 2024 — Aug 2024
Neural Acoustic Processing Lab <i>MATLAB</i> MATLAB signal processing methods for minimally-invasive human neural implants	Columbia Engineering Jun 2023 — Aug 2023
Human Brain Mapping Lab <i>Python, MATLAB</i> Python signal processing to study the role of Sharp Wave–Ripples in memory	Feinstein Institutes for Medical Research Jun 2022 — Mar 2023

ACTIVITIES

Yale Undergraduate Aerospace Association <i>C, C++, Rust</i> CubeSat Architecture and Security Board Lead and Project Liquid Team Member	New Haven, CT Sep 2024 — Present
• Leading conversion of satellite codebase from C to C++ and planning of higher-level design paradigms	
• Designing new STM32-based motherboard for liquid-fuel rocket; rewriting codebase in Rust	
FIRST Robotics Competition <i>Kotlin, Java, Fusion360, Onshape</i> Build Captain, CAD Captain, Field Technician	Cold Spring Harbor, NY Jan 2021 — Apr 2024
• Qualified for World Championship in 2023 and 2024	
• Built autonomous targeting system in addition to leading design in 2024	

Lemelson-MIT InvenTeam <i>Python, Onshape</i> Team Founder and Technical Lead	Cambridge, MA May 2023 — Jun 2024
• Designed and fabricated a cost-effective, environmentally-friendly, and scalable solution for tick mitigation	
• 1 of 8 teams selected nationally for \$7,500 grant, only team to win Microsoft Make What's Next grant	

PROJECTS

Ring: Building an nRF52833-based smart ring featuring all industry features + a mic, in a smaller size	
Watch: Building an esp32s3-based smartwatch	
• Features: OLED touchscreen, laser pointer, flashlight, motor, uSD, 2 mics, IMU, and SpO2+Heart Rate Sensor	
• All drivers open-sourced and written in async Rust, as well as code and ECAD	
Openwhisper: Open-source cross-platform Superwhisper clone, written with Tauri (Rust and Svelte)	
NHRL: Designed robots for and competed in the NHRL Combat Robotics Competition in 2023 and 2024	
Drone: Designed, built, and programmed an rp2040-based FPV drone using KiCAD, Onshape, and Rust	
• Wrote control systems and multiple drivers from scratch; 100% Rust codebase	
Congressional App Challenge: Built a React app to track water quality; 2023 Winner, District NY01	

EXPERIENCE

Languages: C, Rust, C++, Python, MATLAB, Java, Kotlin, Go, React, Svelte, OCaml, CUDA, Verilog, Nix	
Skills/Tools: Linux(Arch, Gentoo, NixOS), Firmware, PyTorch, ECAD, MCAD, 3D Printing, Vim, Zed, Poker	