

# DESMOND MEHTA

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## EDUCATION

### Yale University

B.S.+M.S., Computer Science

- Relevant coursework: Discrete Math, Systems Programming, Compilers, VLSI, Intensive Physics

New Haven, CT

Sep 2024 — May 2028

### Cold Spring Harbor High School

4.22 GPA, 1580 SAT

- Relevant coursework: Linear Algebra, Multivariable Calculus, Physics C, 12× AP 5's

Cold Spring Harbor, NY

Sep 2020 — Jun 2024

### 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

Led full-stack development and deployment of our AI agent orchestration platform

New York, NY

Apr 2025 — Aug 2025

## RESEARCH

### Asynchronous VLSI & Architecture Group

Designing silicon modules for inter-chip communication

Yale University

Jan 2025 — Present

### Bioelectronics Lab

Improved radio transmission protocol for rodent-implanted neural recording device

Feinstein Institutes for Medical Research

Jun 2024 — Aug 2024

### Neural Acoustic Processing Lab

MATLAB signal processing methods for minimally-invasive human neural implants

Columbia Engineering

Jun 2023 — Aug 2023

### Human Brain Mapping Lab

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

CubeSat Architecture and Security Board Lead and Project Liquid Team Member

- Leading migration 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

New Haven, CT

Sep 2024 — Present

### FIRST Robotics Competition

Build Captain, CAD Captain, Field Technician

- Qualified for World Championship in 2023 and 2024
- Developed autonomous targeting system in addition to leading design in 2024

Cold Spring Harbor, NY

Jan 2021 — Apr 2024

### Lemelson-MIT InvenTeam

Team Founder and Technical Lead

- 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

Cambridge, MA

May 2023 — Jun 2024

## PROJECTS

**Watch:** Building an esp32s3-based smartwatch using KiCAD, Onshape, and Rust

- 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 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; codebase is 100% Rust

**Congressional App Challenge:** Developed an app to track water quality; 2023 Winner, District NY01

## EXPERIENCE

**Languages:** C, Rust, C++, Python, MATLAB, Java, Kotlin, Go, JS/TS, React, Svelte, Verilog, CUDA, Nix