ISAIAH MURRAY

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experience

2024 – 2025   **CHERISH HEALTH – ENGINEERING TEAM**   **CAMBRIDGE, MA**

Returned to Cherish Health as a full-time employee during gap year prior to college. Calibrated phased radar arrays to reduce side lobe interference by 20% (TX) and 30% (RX). Sped up state annotation, built internal interface for storing and comparing radar characterization data, organized contractors for MFP. CAM'ed and manufactured injection-molded, machined wood components. Became proficient with GCloud, Gitlab, Solidworks, KeyShot.

2024 – 2025   **ACCESS SPORT AMERICA – COACH**   **DORCHESTER, MA**

Worked at ASA as a coach through two summers. Was stationed between their Malibu and Scituate locations. Worked to provide accessible watersports (paddleboarding, windsurfing, outrigger canoeing) to disabled individuals. Collaborated with the Flutey, Options, & Kids are People organizations. Focus on individuals with nonverbal autism.

2023 – 2023   **MIT CHEM-E - STRANO RESEARCH GROUP – LABORATORY ASSISTANT**   **CAMBRIDGE, MA**

Admitted to the MIT HIP-SAT program (hip-sat.mit.edu) where I worked in Professor Michael Strano's lab to refine the power output of thermal resonators. Tested and developed phase change materials (PCMs). Created and delivered the final presentation at the HIP-SAT Symposium, and presented a poster at the Boston Mammalian Synthetic Biology Symposium.

2022 – 2024   **MATHNASIUM – MATHEMATICS TUTOR**   **COHASSET, MA**

Employed as a math tutor at Mathnasium in Cohasset at the age of 14, tutored there through high school. Worked with clients from the 3rd grade to the 10th grade. Worked with owner to build life skills beyond tutoring.

2022 – 2022   **CHERISH HEALTH – SUMMER MACHINE LEARNING INTERN**   **CAMBRIDGE, MA**

Applied for and received internship at Cherish Health for the summer of 2022. Supported CEO and CTO with user demos in support of their successful Series A investment round. Supported engineering team with machine learning data collection and network training. Developed skills in product demos, CAD, Python, and TensorFlow.

2016 – 2022   **CENTER FOR STUDENT COASTAL RESEARCH – STUDENT RESEARCHER**   **COHASSET, MA**

Student researcher and volunteer - shellfish survey, water quality, drifter teams. Applied & received Marjot grant to study Zostera marina. Analyzed recovery conditions for Labyrinthula zosterae infected specimens by constructing and testing an automated artificial environment.

skills

CAD Software   **FUSION 360, SOLIDWORKS, ONSHAPE, KICAD, ALTIUM DESIGNER, PRUSA SLICER, MASTERCAM, KEYSHOT, BLENDER**
Programming   **C, C++, C#, JAVA, JAVASCRIPT, SWIFT, PYTHON, RUST, MATLAB, WOLFRAM, LATEX**

education

2025 – present   **FRANKLIN W. OLIN COLLEGE OF ENGINEERING**   **NEEDHAM , MA**

Pursuing an ECE education through project-based classes. Utilized biomimicry to inspire weight-efficient jumping mechanisms in DESNAT; Created a facial recognition program through QEA1; compared various epidemiology models in MODSIM. Member of the Baja off-road racing team electronics division - implemented a ride height sensor for suspension tuning, building a CAN-based data collection and diagnostic sensor canopy. Play Rugby and MMA through Babson. Involved with the Babson Mazda Miata racing team. Skilled in SolidWorks, MATLAB.

2020– 2024   **NUVU INNOVATION SCHOOL – 8TH - 12TH GRADES**   **CAMBRIDGE, MA**

Project-based learning studios and seminars. John's Hopkins CTY courses in Bio, Chem, AP Chem, and Essay Writing. Math courses through Art of Problem-solving include Intermediate Algebra, Precalculus, AP Calculus. Multivariable Calc, Differential Equations, Linear Algebra, PSYC-21, CS-50, CSCI-E80 through Harvard Extension.

community   Member of Cohasset Middle School and High School Robotics teams, Cohasset Maritime Institute Rowing, Cohasset Sailing Club, CSCR, Hingham Sailing Club, and Volunteering activities through the Cohasset UU Youth Program. Participate in service trips to Appalachia through the ASP organization.

personal   Enjoy software development and industrial design. Studied classical guitar from the age of 4 to 15. Play squash and rugby; enjoy tennis, pickleball, and golf. Proficient in C#-C++-C, JavaScript, LaTeX, Python, Rust, Ruby, Matlab, Java, Swift, Wolfram, NRF Embedded Firmware, and Intel Quartus Prime FPGA Software. Familiar with RISC-V and ARM chip architecture.