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Thomas Adebiyi

EDUCATION

Massachusetts Institute of Technology — Cambridge, MA
Class of 2021

- BS in Mechanical Engineering, Minor in Design; GPA 4.6/5
- Selected Coursework: Explorations in Product Design, Interconnected Embedded Systems, Dynamics, Measurement and Instrumentation, Design and Manufacturing I, Design Studio, Design Computation, web.lab

RESEARCH & WORK EXPERIENCE

Heirloom — Brisbane, CA
Mechanical Design Engineer, Automation Design | heirloomcarbon.com — Feb 2022- Apr 2023

- Developed automated powder collection stations for outdoor direct air capture structures.
- Co-headed the design (in Solidworks), fabrication, installation, and initial operation of the station for the first deployment, contributing towards sequestering Heirloom's first 30 kg of CO_2 in concrete.
- Built scale prototypes, and executed and documented dozens of tests to evaluate the performance of numerous different subsystem concepts.
- Using mechanical design and manufacturing techniques to create and iterate on robust assemblies for systems meant to run for decades.

MIT 2.009: Product Engineering Processes (MIT Mechanical Engineering) — Aug - Dec 2021
Teaching Assistant, Mentor | web.mit.edu/2.009

- Mentored 8 project teams of 20 on the product design process, project management, and mechanical, electrical, and software design.
- Created class materials, 2D/3D graphics, and photo albums for handouts, posters, presentation backdrops, etc. using Blender and the Adobe suite

Human Systems Lab (MIT AeroAstro) — Jun - Aug 2019
Characterized the effect of spacesuit glove fit on motor skills in a vacuum

- Developed and fabricated physical trials testing tactility, dexterity, etc. to evaluate the capabilities of different gloves.
- Used David Clark Company IVA gloves; Referred to NASA publications while developing trials.

MIT Motorsports Formula SAE Electric Team — Sep 2017- Aug 2018
Aerodynamics Subteam Member

- Using CFD analysis, designed the team's first ever diffuser.
- Fabricated carbon fiber wings, body panels, and the diffuser in house.
- Collaborated with subteams to integrate part designs with the full racecar.

PROJECTS

Spartan (MIT 2.s009 "Explorations in Product Design") — Sep - Dec 2020
Co-System Integrator | https://s009kindness.com/program

- Designed a boxing training device that punches back with a team of 16.
- Pitched product to an audience of thousands.
- Ideated and researched problems and concepts, prepared mock-ups and models for technical design reviews, conducted user interviews, fabricated parts for the product, prepared comprehensive final presentation.
- Personally used Fusion 360 to design parts, 3DS Max for animations.

SKILLS

Design, CFD, FEA: SolidWorks, Onshape, Fusion 360, Rhino 6, 3DS Max, AutoCAD, Simscale, ABAQUS, Unity, Blender, Adobe CC Suite (Illustrator, Photoshop, XD, After Effects, Lightroom), Figma
Manufacturing: FDM/FFF 3D printing, soldering, waterjet, CNC mill, laser cutter, lathe, DFA, DFM
Programming: Javascript, React, HTML5, CSS, MATLAB, Arduino C, Python, Lua, LabVIEW