Fernando José Oliver Mediavilla

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Portfolio: https://fern-0416.github.io/Portfolio/

Education

Massachusetts Institute of Technology, Cambridge, MA **Graduation: May 2027**

- Bachelor of Science in Computer Science and Electrical Engineering. Minor in Philosophy **GPA: 4.8**
- Learning Assistant for 6.200-Circuits and Electronics during Fall 2025. TA for 8.02-Physics II during Spring 2025, TA for 8.01-Physics I during Fall 2024
- Capstone classes:
  - 6.131 - Power Electronics Laboratory - Design and construct power electronic circuits and motor drives
  - 6.115 - Microcomputer Project Laboratory - Analyze and design embedded systems
  - 6.111 - Digital Systems Laboratory - Program and design FPGA circuits and systems

Experience

Design Museum of Barcelona (DHUB), Barcelona, Spain **- Technical intern** **June - August 2025**

- Prepared a robust communication system that recreates the functionality of a 1970's Chilean operations room in the exhibition "How to Design a Revolution: The Chilean Road to Design" within the DHUB
- Prepared thorough documentation on the system and trained museum staff on how to operate the room.

Reality Hack Org, Cambridge, MA - **Board Member, Head of Finance** **Jan 2024-Present**

- Carry out the world's largest independent XR hackathon with over 500 hackers in attendance
- Coordinated venue, over 200k in sponsorships, and technical material/documentation for hackers.

MIT Make, Cambridge, MA - **Mentor** **Aug 2024 - February 2025**

- Supervise two of the most important makerspaces at MIT (Metropolis and The Deep)
- Calibrate, fix, and perform maintenance on heavy machinery (3D printers, metal working, wood working, etc.)

MAS Corporation, San Juan, PR - **Part-time Worker** **June – Aug 2023**

- Created and optimized paperwork organization system within the accounting department
- Praised for availability, productivity, and collaboration in a dynamic, fast-paced office environment

Research

Barcelona Supercomputing Center, Barcelona, Spain **June - August 2025**

- Developed a computer application that simulates quantum physics concepts, such as quantum collapse and quantum entanglement for an upcoming experiential project.

Development of virtual reality for MIT math and physics students, Cambridge, MA **February - May 2025**

- Developed an application for math and physics concept visualization in virtual reality. Concepts include gradient, vector fields, and electric fields. The final objective is implementation in MIT's calculus 2 and physics 2 classes.

Cicata, Instituto Politécnico Nacional, Querétaro, México **June-July 2024**

- Designed a functional prototype of a bladeless wind/water turbine and tested it in the field.
- Used CAD software to fabricate models to support the research of other graduate students in the institute.

Reflective Make-AR In-Action, MIT **Sept - Dec 2023**

- Collaborated on an augmented reality program that teaches users how to use tools for making projects.
- Designed and assembled PCB's to capture speech and user input and to output visual aids and verbal responses.

Activities & Extracurriculars

VR/AR Club at MIT, **President**, President **Aug 2023 – Present**

- Create and manage independent software and hardware projects related toVirtual Reality.
- Budget and manage over 30k in funding
- Co-host the MIT class 2.177-Designing Virtual Worlds. Lead workshops on VR development and project design
- Organize outreach programs for underprivileged communities in MA

Snapdragon Spaces, Spaces Cadet **Apr 2024 - Dec 2024**

- Work on projects involving Augmented Reality devices with selected students from Stanford, MIT, and USC

Association of Puerto Ricans at MIT, Treasurer **Aug 2023 - Present**

- Organize and host events to celebrate Puerto Rican culture and spirit, often alongside other universities.

International Mathematical Olympiad, Competitor **Apr 2023**

Skills & Interests

Languages: Spanish and English (Bilingual), Python, Java, SystemVerilog, Minispec, Assembly, and C++
Makerskills: Woodworking, Welding, 3D Printing, Waterjet, Lathe, Laser Cutting and Sewing
Software: CAD Design, Latex, Unity, Godot, Github