Luis Martinez

786-280-1917 | luism@mit.edu | linkedin.com/in/louis | github.com/LouisTheLuis

EDUCATION

Massachusetts Institute of Technology — Cambridge, MA

Bachelors of Science in Electrical Engineering and Computer Science. **GPA:4.5/5.0** — *Sep. 2020 - May 2024*

- Currently Taking: PCB Design Class
- Relevant Coursework: Introduction to Algorithms, Solid-State Circuits, Digital Systems Lab (FPGA Lab), Fundamentals of Programming, Math for Computer Science, Signal and Processing, Web Lab: A Programming Class and Competition, Circuits and Electronics, Intro to Machine Learning, Computation Structures

Ronald W. Reagan Doral High School — Doral, FL

Debate Club, National Hispanic Honor Society, Mu Alpha Theta, Chemistry Club. **GPA: 4.0/4.0** — *May 2020*

EXPERIENCE

Undergraduate Research Assistant — Jun. 2022 - Nov. 2022

MIT Climate and Sustainability Consortium — *Cambridge, MA*

- Assisted in the discovery and characterization of novel materials with advantageous and nonpolluting properties through the use of machine learning algorithms
- Constructed simulations in Unity for the molecular dynamics of polymers
- Implemented a reinforcement learning architecture for polymer property prediction through the ML-Agents package in Unity

Undergraduate Research Assistant — Jun. 2021 - Aug. 2021

Transiting Exoplanet Survey Satellite (TESS) @ MIT — *Cambridge, MA*

- Helped identify the most promising TESS exoplanet candidates for atmospheric characterization
- Worked with Python in the visualization of data obtained from exoplanets

PROJECTS

Stargazer | *MIT Web Lab Programming Competition* — January 2022

- Co-developed a browser game that teaches how to find constellations in the sky in an interactive manner
- Worked both on the frontend and backend development, using JavaScript (React) HTML/CSS, and MongoDB
- Implemented the d3-celestial API developed from the D3.js visualization library to integrate an interactive celestial map

Audio Transmission via S/PDIF over TOSLINK | *FPGA Laboratory Course* — November 2022

- Worked with two partners to design an audio communication system that allows transmission of audio data from an SD card to a speaker using a TOSLINK fiber optic cable
- Implemented the S/PDIF protocol according to IEC 60958 using SystemVerilog, allowing for the encoding and decoding of audio data
- Designed a VGA display for audio files to be selected on a screen

TECHNICAL SKILLS

Programming Languages/HDL: Java, Python, C++, C#, JavaScript, HTML/CSS, SystemVerilog, Assembly
Frameworks: React, Node.js
Tools: Git, Arduino, Xilinx Vivado, Unity, LaTeX, LTSPice
Libraries: NumPy, Matplotlib, PyTorch
Languages: English, Spanish

HONORS AND AWARDS

Questbridge Finalist — 2020

Venezuelan National Math Olympiad | *Gold Medal* — 2018

Iranian Geometry Olympiad Intermediate Level | *Honourable Mention* — 2018

Olimpíada de Mayo, Second Level | *Gold Medal* — 2017