

Héctor Manuel Lúgaro Rodríguez

Cambridge, MA 02139 | 939-227-2219 | hlugaro@mit.edu

EDUCATION

Massachusetts Institute of Technology

Cambridge, MA

- *Candidate for BS in Electrical Engineering and Computer Science* May 2026
- Relevant Courses: Intro to CS, Intro to Product Design, Calculus III, Physics II GPA N/A
- Interphase EDGE Scholar | MIT Solar Electric Vehicle Team Member | MakerLodge Trainee

Centro Residencial de Oportunidades Educativas de Mayagüez

Mayagüez, PR

- *Student of the Year* | SAT: 1500/1600 (Math 800, EBRW 700) | NASA GBE Mentor June 2022
 - 4x International Science and Engineering Fair Finalist | 3x Puerto Rico Math Olympiad 2nd Place
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RESEARCH

UROP: Understanding Balance with Motion Capture and Radar

Cambridge, MA

Research Assistant

January 2023 – Present

- Research applications of radar and machine learning to monitoring fall risk at home
- Design and prototype of calibration device for FMCW radar used for data collection
- Collaborate in training machine learning model for evaluating patient balance

International Science and Engineering Fair

United States of America

Finalist

August 2018 – May 2022

- Applying OpenCV and Machine Learning to the Enforcement of COVID-19 Prevention Guidelines Robotics and Intelligent Machines
 - Analyzing Computer Generated Collatz-type Fractals Mathematics
 - Analyzing Collatz-type Fractals Using Minkowski Dimensions Mathematics
 - Analysis of Pythagorean Triples and a Generating Formula Mathematics
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LEADERSHIP

CROEM Math Club

Mayagüez, PR

President

October 2021 – June 2022

- Managed meetings and activities with the club's board of directors, members, and professors
 - Led practice sessions and organized lectures in preparation for national level math contests
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SKILLS AND INTERESTS

Software: Python, OpenCV, R, SQL, SolidWorks, Microsoft Office

Languages: English (native), Spanish (native)

Interests: Artificial Intelligence, Signal Processing, Mechanical Engineering