

# Adrian Meza

3 Ames St, Cambridge, MA | (619)-947-1072 | [alm@mit.edu](mailto:alm@mit.edu) | <https://amezaa.github.io/>

## Education

### Massachusetts Institute of Technology (MIT)

Cambridge, MA

*Candidate for Bachelor of Engineering in Electrical Engineering & Computer Science*

*Aug 2016 – Dec 2021*

*Candidate for Bachelor of Science in Physics*

Relevant Coursework: Advances in Computer Vision, Deep Learning Practicum, Fundamentals of Programming, Introduction to Computational Thinking and Data Science, Discrete Applied Mathematics, Computation Structures, Introduction to Algorithms (Self Study), Machine Learning (Self Study)

GPA: 4.4/5.0

## Experience

### MIT Marine Autonomy Bay

Cambridge, MA

*Undergraduate Researcher*

*Aug 2018 – Present*

- Design software to detect presence, speed, and size of ships on the water (from WAM-V robot perspective)
- Employ Computer Vision/Deep Learning techniques to identify various objects and their shapes, colors, and position → interface with a marine autonomous vehicle to influence navigation

### MIT Center for Brains Minds + Machines

Cambridge, MA

*Undergraduate Researcher*

*Aug 2018 – Present*

- Utilizing learning-based approaches to improve motion segmentation and object discovery algorithms
- Using temporal association of objects in video and unsupervised learning to learn visual representations

### MIT Computer Science and Artificial Intelligence Lab - Cybersecurity Group

Cambridge, MA

*Undergraduate Researcher*

*May 2018 – Aug 2018*

- Learned common memory unsafe exploits for low level computer programs through cybersecurity exercises.
- Worked on an AI attack planning graph to analyze computer programs for vulnerabilities and map out possible attack routes.

### MIT Center for Theoretical Physics

Cambridge, MA

*Dark Matter - Undergraduate Researcher*

*Feb 2018 – May 2018*

- Utilized a custom python library to create mock data to simulate potential sources of dark matter around or in the galactic center excess.
- Worked to use CNNs on Kepler telescope data for sources of dark matter, using simulated data for training

### NASA Jet Propulsion Laboratory

Pasadena, CA

*Applied Electromagnetics Lab*

*May 2017- Aug 2017*

- Wrote a custom program using Matlab to simulate the amount of power we could collect at an Avalanche Photodiode Sensor (APD) from light coming in at various angles and to achieve a greater Signal to Noise Ratio.

*Space Sciences Division*

*May 2017- Aug 2017*

- Analyzed possible novel methods for detecting Exoplanets in Extrasolar systems through modulations in Radio Frequency Emissions using Matlab.
- Used Fourier Analysis to test numerous scenarios that we could see upon observing an Extrasolar system.

## Leadership

### MIT Physics Department

Cambridge, MA

*Committee Member*

*Jan 2018 - Present*

- Collaborated with MIT Physics Department and a few other Undergraduates to organize a Physics Values Statement. It outlines our commitment to ensuring well-being, respect, inclusion, collaboration, and mentorship are imperatives in our interactions as students & faculty.
- TA for 'Classical Mechanics' and 'Electricity & Magnetism.' Tutor for 'Waves and Vibrations.'

### City of Children Orphanage Backpack/School Supplies Drive

Ensenada, Mexico

*Founder*

*Aug 2013 - Present*

- Developed and manage a fundraising drive aimed at purchasing school supplies (backpacks, shoes, school utilities, etc.) for approximately 86 kids (ages K-12); delivered every year before the school year starts.

## Skills

- Languages: Python (Proficient), Matlab (Intermediate), C/C++ (Intermediate), JavaScript (Intermediate), HTML/CSS(Intermediate), Assembly (basic), RUST (basic)
- Libraries: TensorFlow/TensorFlow.js (Intermediate), PyTorch (Intermediate), MOOS (Intermediate)
- Fluent in Spanish and English (read, write, speak); knowledgeable in Japanese (read, short conversation)