Adrian Meza

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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: Robotics: Science and Systems, Visual Navigation for Autonomous Vehicles, Advances in Computer Vision, Deep Learning Practicum, Matrix Methods in Data Analysis/Data Science, Introduction to Algorithms, Machine Learning, Artificial Intelligence
GPA: 4.5/5.0

Experience

MIT SPARK Lab **Cambridge, MA**
Researcher Intern *July 2019 –*
- Designing robust convex relaxations for 2-view geometry problem for improved localization and 3D mapping robustness under poor visual conditions

INVETT Research Group **Madrid, Spain**
Undergraduate Researcher *May 2019 – July 2019*
- Implemented Fast Marching [Squared] methods with non-holonomic constraints for efficient path planning on urban roads

Unify ID **San Francisco, CA**
Full Stack Engineering Intern *Jan 2019 – Feb 2019*
- Developed web app to passively authenticate users upon walking to close to an ATM based on Machine Learning models trained on a user's walk cycle

MIT Marine Autonomy Bay **Cambridge, MA**
Undergraduate Researcher *Aug 2018 – Present*
- 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 Theoretical Physics **Cambridge, MA**
Dark Matter - Undergraduate Researcher *Feb 2018 – May 2018*
- 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 Intern *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 Intern *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), C++ (Intermediate), Matlab (Proficient), JavaScript (Intermediate), HTML/CSS(Intermediate), Assembly (basic), RUST (basic)
- Libraries: **ROS** (Intermediate), **OpenCV** (Intemediate), OpenGV (Intermediate), **GTSAM** (Intermediate), PyTorch (Intermediate), TensorFlow/TensorFlow.js (Basic)
- Fluent in Spanish and English (read, write, speak); knowledgeable in Japanese (read, short conversation)