Ethan Marcello

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Objective

Master of Science in Electrical Engineering with focus on robotics and controls. Research and fellowships in autonomous vehicles and systems is preferred. Additional interest in deep learning, computer vision and embedded systems.

Education:

UNITED STATES NAVAL ACADEMY Annapolis, MD

B.S. Robotics and Controls Engineering (Honors) Candidate. Expected graduation May 2020.

- **GPA:** 3.94
- **Research:** Autonomous aggressive aerial maneuvering of the Crazyflie quadcopter to mimic the courtship display dives of the Anna's Hummingbird. The quadcopter is controlled using ROS on a linux machine, and trajectory data collected with the OptiTrack motion capture system.
- **Relevant Coursework:** Autonomous Vehicles, Embedded Microcontroller Systems, Honors Advanced Control Engineering
- **Awards & Honors:** Superintendent's list (*Fall 2018 & Spring 2019*), Dean's list (*Fall 2017-Present*), Inducted into Tau Beta Pi (TBΠ) (*March 2019*)

Internships:

JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY *July-August 2019* Laurel, MD

Intelligent Systems Center (ISC)

- Contributed to a project developing a color filter for the Intel RealSense D435 camera in support of an augmented reality system. Utilitzed C programming language, Microsoft Visual Studio, OpenCV, and Point Cloud Library.

MIT LINCOLN LABORATORY *May-June 2018* Lexington, MA

Interceptor and Sensor Technology (Group 38)

- Characterized a Lord MicroStrain GPS/INSS sensor for use on an airborne platform, and helped set up RS232 serial communication protocol with a Jetson TX-2 to stream data in real-time directly from the device. Utilized C programming language and MATLAB for data processing.

Leadership and Extra-Curricular Activities:

Squad Leader: *Spring Semester 2019*; Responsible for the development and well-being of ten other Midshipmen in my Company. I conducted three formal counselings with each to outline their goals, their progress in achieving them, and advised them in all their Naval Academy endeavors.

Company Administrative Officer: *August 2019-Present*; Responsible for the formatting and smooth operation of the Company's chit routing structure for special requests, keeping record of all important documents for the Company, and compiling weekend overnight liberty requests for the Company (~150 Midshipmen).

Chile LREC (Language Proficiency, Regional Expertise, Cultural Awareness) – Drones and Defense: *March 2019*; Met with several Chilean researchers and engineers working on drone projects to address challenges unique to their country (e.g. fighting forest fires).

Model United Nations (MUN): *September 2018-Present*; Participated in NCSC MUN in Washington D.C. in 2018, and BARMUN in Boston in 2019.

Italian American Midshipman Club (IAMC): *August 2018-Present*; Participated in monthly meetings and designed the club T-shirt.

Skills:

- Proficient in C/C++ programming languages, and MATLAB.
- Familiar with use of linux shell, Microsoft Visual Studio, OpenCV, Point Cloud Library, JavaScript, and HTML.
- Currently working with Robot Operating System (ROS) and Python for my undergraduate research.

ADDITIONAL CONSIDERATIONS

1. Powered Flight Program (PFP) *May-June 2019* accelerated initial flight school training, I achieved my first solo flight in a Piper-Warrior on 20JUN2019 in a 3 and a half week time span.
2. Philmont Scout Ranch Ranger *June 2018* I never actually got the opportunity to lead scouts into the backcountry of Cimarron, NM due to multiple forest fires on the property causing them to close the property to campers for the summer. I did get a chance to learn about the boyscouts and the backcountry though and take a couple hikes with the other Rangers.
3. My embedded systems class is also providing me familiarity with Atmel studio, and assembly language
4. Midshipman Action Group (MAG) *September 2016 – May 2017* Worked on the Greenbury Point Cleanup project. Weeded the gardens and trimmed the trails.
5. Helped to control a 3-axis camera gimbal for the SUAS team using an Arduino UNO *January-March 2018* (Professor DeVries was my supervisor).
6. ES281C School of Drones: built a Gremlin quadrotor and flew it line of sight and FPV
7. D&B: *June 2016-May 2017* Played mallet percussion in USNA's Drum and Bugle Corps (bells, xylophone, marimba, vibraphone, chimes).
8. **Hobbies:** Snowboarding, drones (I've owned and flown the DJI Phantom 3 and Spark platforms for videography use), videography and video editing, fitness, listening to music, hiking, camping, PC gaming.