Marc de Lecea

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Education

Master of Science in Robotics — May 2022
University of Delaware, Newark, DE – GPA: 3.70

Bachelor's in Mechanical Engineering — May 2021
University of Delaware, Newark, DE
Minor in Computer Science – Dean's List

Experience

Research Assistant, University of Delaware — June 2020 – Present
- Applied A* pathfinding algorithm and plane mapping to microrobot swarm simulation
- Created MATLAB GUI to complement visualization of microrobots and their path planning decisions
- Used LabVIEW to create manual control schema of microrobots using magnetic field array

Machine Design TA, University of Delaware — August 2020 – December 2020
- Created interactive Solidworks models for students studying from home.
- Led office hours and created brief discussion videos demonstrating taught concepts

Engineering Intern, TRIC Robotics — January 2019 – March 2019
- Developed novel corn root imaging robot in collaboration with a PhD candidate
- Proposed and modeled alternative mechanical solutions to reduce complexity

Engineering Intern, SAP Design Shop — June 2018 – August 2018
- Created a teaching program including a Snap! programmable car and a blockchain demonstration using Micro:Bits
- Built applications for Android Things and AWS DeepLens to expand platform availability for team

Engineering Intern, Vala Sciences — June 2015 – July 2015
- Planned and designed implementation of machine parts for a half-million-dollar high throughput microscope which was approved by a team of professional engineers
- Designed lens/mirror mount, 3D-printed mockup, shipping crate, I/O panel, and badge jig

Leadership

Treasurer, Mechanical Engineering Student Squad — April 2018 – Present
- Logging, managing, and reducing club spending
- Functioning as a tour guide for potential/incoming mechanical engineering students

Chassis Lead, UDel FSAE Electric Team — March 2018 – October 2018
- Planned, designed, and manufactured modified chassis to accept new requirements for electric conversion
- Coordinated small team and fundraised to acquire space, tools, and materials necessary

Safety Captain/Co-lead, Gunn Robotics Team — August 2014 – May 2017
- Rewrote, enforced, and presented the safety practices of team's machine shop
- Organized and taught team of fifty students to prototype and machine mechanisms to manipulate game pieces for a regional-winning, championship performing robot

Skills and Abilities

- Bilingual in Spanish
- Python, Java, MATLAB, C, C++, UNIX
- Very experienced with SolidWorks
- Advanced machining knowledge