Sidney M. Velado

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EDUCATION

Carnegie Mellon University, Pittsburgh PA
Bachelor of Science in Mechanical Engineering with an Additional Major in Robotics
Expected Graduation: May 2020

EXPERIENCE

Computational Engineering and Robotics Laboratory, Carnegie Mellon University**,** Pittsburgh PA**,** Fall 2018 - Present
Robotics Engineer
- Developed an autonomous robotic system for inspection and cleaning tasks for large ship
- Wrote and maintained Arduino ROS nodes
- Modeled and implemented underwater motion and path planning

Robotics Institute Biorobotics Laboratory, Carnegie Mellon University**,** Pittsburgh PA**,** Summer 2018 - Present
Robotics Engineer
- Designed different mechanical components in CAD for a wide array of projects
- Machined, 3D printed, and laser cut designed components and integrated them into robotic systems
- Programmed in a Linux Environment (Ubuntu)
- Coded in a C++/C and Python and implemented them in a ROS framework

PROJECTS

ODrive ROS Package, ODrive Robotics, Summer 2018 - Present
- Developed **ROS** package for the ODrive motor controller
- Tested and deployed ODrive ROS package
- Contributed to the ODrive Robotics Documentation

Urban Search and Rescue Robot, Carnegie Mellon Robotics Competition, March 2018
- Built a robot with the Lego Mindstorms kit, custom acrylic, and 3D printed components
- Programmed controls and teleoperation in Robot C framework

G.O.A.T. Mechanical Robot, Fall 2017
- Created a three-bar linkage mechanical robot modeled after a goat
- Used a combination of CAD modeling and rapid manufacturing techniques to test prototypes and final design

RELEVANT COURSES

Robot Kinematics and Dynamics	Principles of Imperative Computation	Dynamic Systems
Mobile Robot Development	Computer Vision (Spring 2019)	Machine Learning (Spring 2019)

LEADERSHIP AND EXTRACURRICULARS

Internal Outreach Chair, Spanish and Latin Student Association, Spring 2017 - Present
- Recruited incoming students to the organization and improved membership by 30%
- Organized forums for students to be able discuss the LatinX experience at Carnegie Mellon

Social Chair, Phi Delta Theta Fraternity, Fall 2016 – 2017 (Member since Fall 2015)
- Led a 12-member committee to organize and plan all social functions
- Managed a $14,000 budget
- Planned a formal dinner for 150 people at popular Pittsburgh venues

Vice President, CMU Club Lacrosse, Fall 2017 – Spring 2017 (Member since Fall 2015)
- Set up transportation to games
- Ran the club's finances in cooperation with the university

Society of Hispanic Professional Engineers, Fall 2015
- General Body Member

SKILLS

Programming: ROS, C++, MATLAB, Python, C, Development in Linux, Git
Engineering: Machine Shop, SolidWorks, CNC Machining, 3D Printing, FEA Simulation
Spoken Languages: Fluent in Spanish; Conversant in French