STEPHANIE TAM

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Education

Carnegie Mellon University
Bachelor of Science in Mechanical Engineering
Double Major in Robotics
Class of 2021 Honors Graduate • 3.79/4.0 QPA

Professional Skills

Communication
Leadership
Teamwork
Problem-solving

Languages

English
Spanish

Technical Skills

Microsoft Office
MATLAB
Solidworks
Siemens NX
LabView
Machining
GD&T
Rapid Prototyping
Python

Activities & Leadership

STEMxx Chats
College Core Group Leader • August 2020 – Present
An ecosystem of empowerment for women in STEM, breaking down barriers between disciplines and career stages, and propelling positive changemakers to solve the big problems of our day

SDC Booth
Structural Design Chair • August 2019 – Present
Lead the structural design of a 20'x20' single story booth, ensuring that the structure met all of the safety requirements and housing standards

Juntos, Bridges to Community
President • August 2018 – Present
Host events to raise cultural awareness of issues/events in Latin America around the local community

Plan sustainable initiatives to implement in small Latin American communities in need, over an annual week-long summer trip

Exit 5 Robotics
Team Build Captain, Outreach and Referee Volunteer
September 2010 – May 2017

Awards

Senior Leadership Recognition Recipient, 2021
Boeing Scholarship, 2020
Build18, General Motors Innovation Award, 2020
FIRST Robotics Competition: State Champions Award, 2011, 2012, 2013
Moonbots, Google Lunar XPRIZE Finalist, 2014
World Robot Olympiad, US National Champion & Qatar WRO International Finals: 29/85 teams, 2015
VEX Robotics Competition, NJ State Finals: Think Award, 2015

Experience

Boeing | Advanced Structures Design Intern
June 2020 – August 2020
Managed detailed design for arc jet test coupon designed to evaluate ablation characteristics of strake geometries for hypersonic vehicle platforms
Generated CAD models and test matrix to support coupon manufacturing, fabrication and testing

CMU College of Engineering | Intro to Machining Teaching Assistant
August 2019 – May 2021
Assisted machinists to teach students the fundamentals of machining parts from engineering drawings

Anderson-Negele | Manufacturing Engineering Intern
June 2019 – August 2019
Automated and redesigned a press-fixture used in assembly through the incorporation of pneumatics
Created a quick-action TIG welding torch holder that allowed welders to rapidly change torch position to preset locations

CMU Planetary Robotics Lab | CubeRover Research Assistant
January 2019 – May 2019
Designed, constructed and tested constrainers and deployment mechanisms for a 2-kg rover

US Bureau of Reclamation | Mechanical Engineering Intern
June 2018 – August 2018
Aided in collecting photogrammetric data from unmanned aerial systems
Created a data optimization method to efficiently create 3D spatial models of Reclamation's facilities to improve condition assessment

Projects

Seabot | Robotics Capstone Project
September 2020 – Present
Designed an underwater robotic system to aid the ocean pollution clean-up efforts by collecting sub-surface debris. Created in-depth requirements specification, concept design, verification and validation, and detailed design documents to navigate the system development.

ASL Robotic Hand | Build 18 Hardware Hackathon
January 2020
Developed a system that translates American Sign Language to English and vice versa. Created a robotic hand that can simulate the ASL alphabet as well as other simple one-handed signs to translate from English to ASL. Interpret hand signs using a Leap Motion Controller to translate from ASL to English.

Mobile Robot Forklift Simulation
September 2020 – December 2020
Created a complete robot software system for mini forktrucks that can move pallets from place to place just like commercial automated guided vehicles do today. Implemented algorithms specific to mobile robots such as motion control, trajectory generation, state estimation, and perception.