JULIA SCHATZ

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⌂ juliaschatz

Electrical Engineering junior with applied experience in software development, autonomous robotics, and hardware design. Focus in control systems and embedded software. Experience leading and working in collaborative team environments.

Skills

ROBOTICS
ROS
Computer Vision
Motion and Trajectory Planning
Control Systems

SOFTWARE DEVELOPMENT
C
C++
Python
Matlab

MECHANICAL DESIGN
Solidworks

ELECTRONICS
EAGLE
Altium
STM32

Education

University of Minnesota — Sept. 2018 to Current
BS Electrical Engineering 2021
Minor Computer Science 2021

Projects

NASA Robotic Mining Competition — Sept. 2019 to Current
Worked with a small team to develop autonomous robot for simulated lunar mining mission.
Used ROS to integrate sensor nodes for SLAM implementation.
Developed safety critical firm real-time control system using STM32.

Robotic Basketball Competition — Jan. 2019 to Apr. 2019
Developed computer vision assisted aiming program using OpenCV.

Custom Quadcopter
Designed a medium-scale quadcopter that self-stabilizes using LQR control.
Developed model and tuned system in Matlab.

DC Motor Speed Controller
Designed a 9V 20A capable H-bridge electronic speed controller.
Selected hardware, designed PCB using EAGLE, wrote AVR firmware using embedded C and Assembly language.

Employment

University of Minnesota OIT
User Support — Aug. 2018 to Current

Open Access Technology International
Software Development Intern — June 2016 to Aug. 2016
Worked with a team of OATI employees to assist with device and software testing. Created inventory and issue tracking workflows. Conducted internal user experience surveys to improve documentation.