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OBJECTIVE: Member of Michigan autonomous aerial vehicle, Michigan intelligent robot and autonomy lab.
Looking for full-time/internship/Co-op on software/AI development in trade that requires understanding on data structure, algorithms.

EDUCATION:

University of Michigan BSE in Computer Engineering, August 2022 - Dec 2024	UC Santa Barbara BS in Physics(transferred to Umich) September 2020 - June 2022
GPA: 3.52	

SKILLS:

Programming Languages: C++/C, Python, Pytorch, Reinforcement learning, Tensorflow, and C, Verilog and ARM

Robotics and Simulation: Robot Operating System (ROS), Gazebo, SLAM, perception

Embedded Systems: Skilled in STM32 Embedded System Design, including UART communication and PWM control

Tools and Technologies: Competent in computer architecture, FPGA through Verilog, and embedded control systems with PD, PID, LQE, non-linear controller

Program Management skills: Production planning and commercial offer based on market investigation

RELEVANT COURSES:a

Data structure and algorithm, Computer vision, AI, computer organization, Logic circuit, robotics, FPGA through Verilog, Embedded control sys, Robotic control

EXPERIENCE:

University of Michigan, EECS department(Aug 2024 - present)
Graduate course grader/TA
Grading EECS 461, Embedded control system and assist professor with homework/course materials

University of Michigan - Intelligent Robot & Autonomy Lab(June 2023 - Dec 2023)
Control algorithm developer with C++ & python

- Using common ADTs and matrix lib to Implemented inverse dynamics for drone movement.
- Solving control problems such as control singularities issues due to extra degree of freedom
- Using geometric knowledge, such as Lie group, and C++ geometric libs to debug and analyze robots' status
- Using python plots and physics knowledge to analyze stability of the system

University of Michigan - Intelligent Robot & Autonomy Lab(Aug 2022 - Feb 2023)
Software developer with C++
Research on multi-robot coordinations and decision making

- Simulated multi-drone agents in a Gazebo environment with C++ MAV lib
- Established inter-drone communication through objects-oriented C++ code.
- Simulated communication noise and interruption.
- Using bash script to automatically execute the entire robot system that includes control, motion planning, and log data recording.

BARDOR (May 2024 - current)
Automotive program manager intern
Coordinate automotive parts trade between OEMs(such as Stellantis, GM) and their global suppliers

- Involve in commercial offers and production planning process based on market norm, production volume
- Analyze Technical source package's hardware, mechanical, and software requirements
- Work with OEM buyer and engineer to issue RFQ submission

Toy Laser Tag Robots design(Oct 2023 - Dec 2023)
Course open-ending project with STM32

- Use UART protocol and self-created lower level protocol for robots wireless communication
- Using PWM and C language to implement robot remote control.