

Minh Nguyen

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EXPERIENCE

SLICE Lab

Undergraduate Researcher

September 2023 – Present

Berkeley, CA

- Research into developing computer architecture for robotic control algorithms
 - Hardware parallelization for Linear Quadratic Regulators

NASA Jet Propulsion Laboratory

Robotics Intern

January 2023 – August 2023

Pasadena, CA

- Research and development for a novel, articulated suspension lunar rover
 - Designed and built two power distribution PCBs for power management
 - Wrote ROS simulation environments to assess locomotion capabilities
- Lead author for research into energetically optimal gait transitions for multi-modal robots
 - Designed and implemented trajectory optimization algorithms in C++
 - *Trajectory Optimization Methods for Energy Efficient Gait Transitions on Multi-Modal Robots* under review for the IEEE Aerospace Conference

Hybrid Robotics Lab

Undergraduate Researcher

August 2022 – Present

Berkeley, CA

- Research on developing reinforcement learning policies for cooperative, multi-agent quadruped systems
 - Developed simulation to real world codebase for Unitree A1 quadrupedal robots
 - Implemented localization pipeline and ran experiments on real hardware to evaluate policies

Wainamics

Engineering Intern

May 2022 – August 2022

Pleasanton, CA

- Research and development of microfluidic systems
 - Designing flow cells and testing different methods of controlling fluid
- Development of a general-purpose microfluidic controller
 - Assembling and reworking PCB boards and components.
 - Tuning Peltier machine with closed loop control for temperature-dependent reactions

Space Enterprise at Berkeley

Member

Aug 2021 – January 2023

Berkeley, CA

- Responsible for the software of the rocket's integrated boards
 - Redesigned the existing firmware in C++ to be more reliable, readable, and modular
- Developing a motor-powered pressure regulator with closed loop control and a feedforward model
 - Programmed system in C++, designed electronics, modeled system, and tuned control loops

EDUCATION

University of California, Berkeley

Major: Computer Science

Expected Graduation: May 2024

Berkeley, CA

- GPA: 3.88/4.0
- Recipient of the George & Virginia Signorotti & Pepsi-Cola Scholarship (2020)
- Involved with teaching and tutoring undergraduate computer science classes

SKILLS

- 8+ years of experience in C++, Java, and Python
- Extensive Experience in ROS, Algorithm Design, Robotic Control, Digital Signal Processing, FPGA Design, PCB Design, Machine Learning, and Power Distribution Systems.