Minh Nguyen

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EXPERIENCE

SLICE Lab **September 2023 – Present**
Undergraduate Researcher *Berkeley, CA*

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

NASA Jet Propulsion Laboratory **January 2023 – August 2023**
Robotics Intern *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 **August 2022 – Present**
Undergraduate Researcher *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 **May 2022 – August 2022**
Engineering Intern *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 **Aug 2021 – January 2023**
Member *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 **Expected Graduation: May 2024**
Major: Computer Science *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.