

# Sidney Nimako

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## EDUCATION

### Carnegie Mellon University

Master of Science in Robotics, May 2025

Bachelor of Science in Mechanical Engineering minor in Robotics (3.52/4.0), May 2023

## EXPERIENCE

### Hardware Engineering Intern | DoorDash Labs | Summers 2022, 2023 | San Francisco, CA

- (2022) Designed and constructed the electrical system for a 4 quadrant dynamometer
- (2023) Developed GUI for interfacing with a Dynamometer for non-expert users
- (2023) Developed controllers for velocity and torque tracking

### Undergraduate TA | Carnegie Mellon University | Spring 2023 | Pittsburgh, PA

- Delivered course content on Dynamics Systems and Controls to 90+ students
- Conducted office hours to provide content and programming assistance

### Undergraduate Researcher | Robomechanics Lab | Fall & Spring 2023 | Pittsburgh, PA

- Created functions approximating the inertial and geometric impacts of active spines on quadrupedal robots
- Created simulation environments for accessing robot performance

### Robotics Intern | Facebook AI Research & CMU Robotics Institute | Summer 2021 | Pittsburgh, PA (Remote)

- Redesigned a multi-digit robotic hand to decrease envelope by 20%, increase range of motion and improve assembly
- Created documentation on the assembly process and use for the existing hand design
- Ran consistency and robustness tests on soft, capacitive sensors

## PROJECTS Additional Projects available at <http://snibo.me>

### Mapping and Payload Robot (MAPR) | Robotics Capstone | Robotics Capstone

- Built an autonomous indoor delivery robot using ROS1 and off the shelf components
- Led development of mobility subsystem in software and hardware

### Phlebot | Mechatronic Design | Mechatronic Design

- Designed and prototyped an autonomous venipuncture robot powered by a Jetson Nano and 3D printer driver
- Led electromechanical system integration and co-led mechanism design

### Jenga Tower Robot | Robot Kinematics and Dynamics | Robot Kinematics and Dynamics

- Implemented control software for a 4-dof robotic arm to build a jenga tower in record time

### Macropad Keyboard | Independent | Independent

- Created hardware (mechanical and PCB) and firmware for a 7-key mechanical keyboard with a built-in rotary encoder

## SKILLS

Digital: Python, C++, MatLab, Javascript, LaTeX, C, KiCAD, Linux, Solidworks, Blender, Unity

Physical: 3D Printing, Mill, Lathe, Soldering, Laser Cutting, Circuit Design

## ACTIVITIES & HONORS

Dean's List | Spring 2022, Fall 2022, Spring 2023

Outstanding Citizenship Award (2019) *from The National Society of the Sons of The American Revolution*

University Honors (2023) *from Carnegie Mellon University*

Departmental Honors (2023) *from Department of Mechanical Engineering*

## COURSEWORK

*Robot Kinematics and Dynamics | Imperative Programming | Human-Robot Interaction | Robotic Systems Engineering | Mechatronic Design | Modern Control Theory*