Sidney Nimako

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snibo.me | snibo | snibo13

EXPERIENCE

DoorDash Labs | Hardware Engineering Intern
Summer 2022 | San Francisco, CA

- Designed and constructed the electrical system for a 4 quadrant dynamometer including sensing and drive systems
- Modified motor controller C firmware to enable sensor interaction
- Wrote MATLAB software to enable control of the dynamometer and sensor data collection

Facebook AI Research & CMU Robotics Institute | Robotics Intern
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

Biomotivate | VR Development Intern
Summer 2020 | Pittsburgh, PA (Remote)

- Designed and implemented prototypes of an addiction rehab app guided by behavioral psychology research
- Built a data collection solution to aid analysis of therapeutic benefits of various experiences
- Built prototype experiences for therapeutic evaluation

PROJECTS

Additional Projects available at http://snibo.me

Jenga Tower Robot | Robot Kinematics and Dynamics
Fall 2021

- Implemented control software for a 4-dof robotic arm to build a jenga tower
- Performed mechanical maintenance on a Hebi Robot arm
- Completed the task in a course fastest time (11.47 s)

Linkage System | Engineering Design I
Fall 2021

- Designed a 4-bar linkage system to convert rotary to linear motion that resulted in about 40% actuation time

Power Drill Assistive Product | Engineering Design I
Fall 2021

- Conducted user surveys to determine complications when using a power drill with wrist tendinitis
- Manufactured a full-scale, functioning prototype of the attachment to improve usability for target group
- Created GD&T drawings for components of the attachment

Macropad Keyboard | Independent
Summer 2021

- Designed a 7-key mechanical keyboard with a built-in rotary encoder
- Created circuitry schematics and PCB for the board using KiCad
- Wrote C Firmware to allow for multiple profiles of key layouts

EDUCATION

Carnegie Mellon University
Bachelor of Science in Mechanical Engineering
Minor in Robotics
GPA 3.4/4.0
May 2023

MS in Mechanical Engineering
May 2024

COURSEWORK

Heat Transfer
Robot Kinematics and Dynamics
Fluid Mechanics
Stress Analysis
Imperative Programming
Intro. to Electrical Engineering
Human Robot Interaction
Space Robotics
Feedback Control System
Robotics Systems Engineering

SKILLS

Digital	Physical
Python	3D Printing
C++	Mill
MatLab	Lathe
JavaScript	Soldering
KiCAD	Circuits
Latex	Laser Cutting
C	Arduino
Linux	
SolidWorks	
Blender	
Unreal Engine	

ACTIVITIES & HONORS

Engineering Dean's List
Spring 2022

SDC Buggy
2021 - 2022

Carnegie Mellon Rocket Command
2019 - 2021

Carnegie Mellon Racing
2019 - 2020

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

Illinois State Scholar (2019) *from The State of Illinois*