DANIEL SOLOMON
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EDUCATION

Harvard University Cambridge, MA
A.B. Degree in Biomedical Engineering May 2023

EXPERIENCE

PISON TECHNOLOGY (Hand gesture recognition wearable technology company) Boston, MA
Summer Research Intern June-Aug 2022

- Conducted extensive recordings and evaluations of 116 hand gestures from over 75 volunteers, contributing to the generation of a comprehensive dataset. Results informed the company's software, electronics, and hardware decisions
- Improved the recording process by incorporating inertial measurement unit sensors and a high-resolution camera, which enabled the collection of 5 additional vectors of data using Python and Arduino code

HARVARD SCHOOL OF ENGINEERING AND APPLIED SCIENCES Cambridge, MA
Undergraduate Researcher, Jia Liu Group (Bioelectronics lab) Jan 2020-Sept 2022

- Developed multimodality manifold analysis Python script to enhance neuron spike data visualization
- Created 3 MATLAB programs to compare movements and behaviors of control and experimental tadpoles using OpenCV: Paper pending submission in Science

MASSACHUSETTS GENERAL HOSPITAL WELLMAN CENTER OF PHOTOMEDICINE Boston, MA
Research Intern, The Tearney Lab (Lab for non-invasives imaging for disease diagnosis) Jan-Aug 2021

- Prototyped an inexpensive laser microscopy system, to be used by primary care physicians to identify dermatological lesions, that incorporated a novel, cost-saving method, reducing the cost of the system from $2,000 to $150

CELLARIA (Personalized oncology company) Wakefield, MA
Research Intern June-Dec 2020

- Utilized statistical analysis and data visualization techniques to analyze the effectiveness of cancer drugs using the company's proprietary cancer cell models, providing valuable insights to the executive team

PROJECTS

BIOSENSING ARTIFICIAL NOSE Cambridge, MA
Project Developer Sept 2022-Present

- Fabricating a device to detect different concentrations of biological molecules in a lab setting. Built housing using Fusion 360, designed the circuit board using EAGLE, and Python to develop the software for the biosensing device: Turning concept into a company

HOME ALONE STYLE TOILET PAPER TURRET Cambridge, MA
Aiming Lead Sept-Dec 2022

- Collaborated with a team of 8 using Python and JavaScript to automate, and integrate the aiming of a machine that shoots out toilet paper

LEADERSHIP AND ACTIVITIES

Student-Athlete Wellness Leaders, Co-President (2020-23); Member (Sept 2019 – May 2023)

- Organized meetings and helped train 50 members to direct others to the appropriate mental health resources on campus
- Facilitated mental health events that provided a safe space for student-athletes to discuss mental health concerns and share effective coping mechanisms

Harvard Fencing Team, Captain (2021- 22); Member (Sept 2018 – April 2023)

- All-Ivy 2018-19 and 2021-22, Academic All-Ivy 2021-22, and NCAA All-American 2018-19

ADDITIONAL SKILLS/ACTIVITIES:

Skills: Python, Arduino, C++, HTML, Fusion 360, EAGLE, Kotlin, Cell Culture, MEMS Fabrication, Google Firebase
Activities/Hobbies: Student-Athlete Advisory Committee board member, Harvard WHRB weekly music show host, Teaching Fellow for Physiological Systems Analysis, Tae-kwon-do third-degree blackbelt