

Education

UNIVERSITY OF CALIFORNIA, SAN DIEGO: LA JOLLA, CA

- Doctoral Candidate in Bioengineering, June 2024

THE UNIVERSITY OF ARIZONA HONORS COLLEGE: TUCSON, AZ

- BS in Biomedical Engineering, May 2019
- Minor in Electrical and Computer Engineering
- Cumulative GPA: **3.839**

Research Experience

UCSD GRADUATE STUDENT RESEARCHER | SUMMER 2019 – PRESENT

- Investigating methods of increasing **transcytosis of nanomaterials** across the blood-brain barrier.
- Working in the lab of professor Dr. Ester Kwon within the Bioengineering department at UC San Diego.

MARC PROGRAM TRAINEE | SUMMER 2017 – SPRING 2019

- Maximizing Access to Research Careers (MARC) provides support and training for students interested in a Ph.D. who are underrepresented in the biomedical sciences.
- Working with professor Dr. Jeong-Yeol Yoon within the Biomedical Engineering department.
- Investigating the applications of a **paper-based biomimetic chip**, such as the study of angiogenesis.

SENIOR DESIGN THESIS PROJECT | FALL 2018 – SPRING 2019

- Working with Ventana Medical Systems on a **tissue thickness analyzer** for histology tissue staining applications.
- Serving as the team leader and electrical engineer.
- Building a reflectance confocal microscopy system for automated readings of tissue thickness between 1-10 μm .

UNIVERSITY OF MICHIGAN UNDERGRADUATE RESEARCHER | SUMMER 2018

- Summer Research Opportunity Program (SROP) provides support to students to conduct an intensive graduate level research project.
- Worked with Drs. John Seymour and Euisik Yoon in the Electrical Engineering and Computer Science department on an **automated pipette control system** capable of moving a pipette in response to external movement or in search of neuron activity.

NSCS HONORS INDEPENDENT STUDY PROJECT | SPRING and FALL 2016

- Worked with professor Dr. Charles Higgins in the Neuroscience and Cognitive Science department.
- Involved contributing to the development of *A Compact Consumer Brain Monitoring Device for Sleep Analysis and Waking Neurofeedback*.

Skills

PROGRAMS AND LANGUAGES

- C/C++, Python, Verilog, MATLAB
- Xilinx Vivado, ImageJ, Visual Studio, Solidworks, Git
- MS: Word, Excel, and PowerPoint
- Adobe Photoshop and Illustrator

TECHNICAL

- Cryosectioning, Cell Culture, Fluorescence Microscopy, 3D Printer, Centrifuge, Autoclave
- Electronics Prototyping: Breadboard, Wiring, Connecting, Soldering
- Microprocessor Programming: I2C, SPI, UART

Honors and Awards

- Sloan Scholar Award and Scholarship | 2019-2024
- National Scholar Award and Scholarship | 2015-2019
- Departmental Honors for Outstanding Achievement | 2018
- Dean's List with Distinction (4.0 GPA) | Spring 2017, Fall 2017, Spring 2018
- Dean's List (3.5-3.99 GPA) | Fall 2016, Spring 2016
- National Hispanic Recognition Program | 2015

Conferences and Presentations

- Annual Biomedical Research Conference for Minority Students (ABRCMS) | 2017 and 2018
- Summer Research Opportunity Program (SROP) Student Research Symposium | 2018
- Biomedical Engineering Student Research Expo | 2018
- Undergraduate Biology Research Program (UBRP) | 2018
- University of Arizona Global Health Competition | 2018
- Undergraduate Research Opportunities Consortium (UROC) | 2017

Related Coursework

- Microprocessor Organization
- Computer-Aided Logic Design
- Fabrication: Micro and Nanodevices
- Biomaterial-Tissue Interactions
- Sensors and Controls
- Tissue Engineering