Connor Nieh

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EDUCATION

Duke University, Pratt School of Engineering, M.Eng. Medical Technology Design *Expected Dec. 2026*
- Coursework: Design Health, Advanced Design and Manufacturing, Signal Processing and Applied Mathematics

University of California, Riverside, B.S. Bioengineering Sept. 2021- June 2025
- Coursework: Biochemistry, Bioinstrumentation, Biomaterials, Biomechanics, Biophysics, Circulation Physiology, C++, Electrical Engineering, Optical Imaging, Statistics, Tissue Engineering, Quantitative Physiology
- Awards: Cum Laude, Dean's Honors List, Chancellor's Honors List, 3.76 GPA

DEVICE DEVELOPMENT EXPERIENCE

Graduate Research Assistant, Durham, NC Sept. 2025 – Present
Biomedical Interferometry Optics and Spectroscopy Lab, Duke University
- Transforming a quantitative phase imaging system into a low-cost diagnostic device for sickle cell disease, enabling point-of-care clinical application in low access healthcare environments
- Working in a clean room to produce novel microfluidic chips and develop a repeatable manufacturing protocol

Duke Design Health Medical Device, Durham, NC Aug. 2025 – Present
Design in Healthcare Series, Duke University
- Engaging in ethnographic research and root cause analysis to define unmet needs in patient care
- Driving early-stage prototyping, CAD modeling, and bench-testing of a user-driven medical device concept

Microscope Integrated Instrumentation for OCT Project, Riverside, CA Sept. 2024 – June 2025
Optical Neural Imaging Lab, University of California, Riverside
- Prototyped and validated a device to integrate an optical coherence tomography (OCT) system into an upright microscope to enable simultaneous, multi-modality imaging of tissue structures as part of a senior design project
- Optimized OCT performance by collimating and aligning optical components in a custom 3-D printed housing unit, increasing imaging clarity and system reliability

Medical Device Development Intern, Claremont, CA June 2023 – July 2023
Keck Graduate Institute, Claremont Colleges
- Co-designed and prototyped a medical device to promote neuroplasticity in dementia patients, integrating CAD, electrical, and Python programming skills to deliver a functional, patient-focused product

RESEARCH EXPERIENCE

Undergraduate Researcher, Riverside, CA Oct. 2023 – June 2025
Tissue Injury and Mortality Engineering Bioengineering Lab, University of California, Riverside
- Engaged in disseminative research by investigating stress tolerance of genetically engineered stem cell therapies and presenting findings on ASC toxic responses at the UCR Undergraduate Research Symposium
- Created an adaptable multi-cell proliferation model of cdc2 and cyclin interactions in MATLAB

Summer Biomedical Intern, Woodland Hills, CA June 2024 – Sept. 2024
Terasaki Institute for Biomedical Innovation
- Led parallel projects in iPSC characterization, 3-D organoid culturing, and drug assay development, accelerating experiment throughput and supporting precision medicine studies in oncology
- Developed and documented over 5 tissue processing, organoid culturing, cell harvesting, and drug dosing protocols
- Presented research on novel disease modeling and cell-based diagnostic applications of organoid technologies

ADDITIONAL SKILLS

R&D: CAD Modeling, Design Documentation, DFA, DFM, Ethnographic Research, FEA, Image Reconstruction, Iterative Prototyping, Root Cause Analysis, Validation Testing

Software: Arduino Programming, CB-Docking, COMSOL Multiphysics, C++, Fusion 360, Google Suite, Image Reconstruction, Kivy, MATLAB, Microsoft Suite, On-Shape CAD, Python, SOLIDWORKS, 3-D Printing, 3-D Slicer

Laboratory: Confocal Microscopy, DNA/RNA Isolation, ELISA, Fluorescence Imaging, Microfluidic Fabrication, OCT Imaging, Optics, Organoid Characterization, PCR, Quantitative Phase Imaging, 2-D/3-D Cell Culture

EXTRACURRICULARS

International Society of Pharmaceutical Engineering Mar. 2023 – June 2025
Vice President, University of California, Riverside
- Coordinated member participation in professional workshops and networking events with industry leaders