Christopher Jewell

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EDUCATION

University of Southern California, *Los Angeles, CA* — May 2024
Bachelor of Science, Biomedical Engineering (Mechanical) — GPA 4.00
Presidential Scholar (Half Tuition)

RELEVANT COURSEWORK

Computer-Aided Design for Bio-Mechanical Systems

- Drafted and assembled a functional 120-part WALL-E replica using SolidWorks
- Created advanced parts for stress analysis, motion studies, photorealistic rendering, and design drawings

Additional Courses: FDA Regulations of Medical Devices, Statistics, Dynamics of Fluids, Linear Circuits

ACADEMIC PROJECTS

HEDCO Neuroscience (USC), *Los Angeles, CA* — Jan 2022–Present
Research Assistant

- Developed a compartmentalized dendritic model using NEURON module in Python
- Measured nonlinear somatic output frequency as a function of spatial synaptic inputs

USC MEDesign, *Los Angeles, CA* — Jan 2023–May 2023
Team Member

- Fabricated 3D-printed cassettes for peanut-detecting lateral flow assays in SolidWorks
- Optimized capillary flow and product cost through material selection and computational stress analysis

WORK EXPERIENCE

AesculaTech, *Los Angeles, CA* — May 2023–Aug 2023
Product Development Intern for *Humidifeye*

- Devised and performed cadaveric rabbit study for biocompatibility protocol of hydrogel punctal plug
- Created a qualified clinical database for OUS pilot study data collection using Excel VBA
- Developed and modified test methods for design and process V&V of hydrogel-applicator system
- Iterated on manufacturing fixturing in SolidWorks for hydrogel microdispensing process

University of Southern California, *Los Angeles, CA* — Sep 2022–Present
Teaching Assistant for Communications in the Nervous System

- Instruct weekly discussion sections and manage exams, assignments, and class work
- Organize course plans for supplemental instruction regarding class content (10 hours weekly)

Terasaki Institute for Biomedical Innovation, *Los Angeles, CA* — May 2022–Jan 2023
Biomedical Research Intern

- Synthesized novel gelatin- and hyaluronic acid-based hydrogels to mimic brain rheology
- Fabricated microfluidic glioblastoma spheroids-on-chip for chemotherapy drug screening
- Performed tensile testing, cell culture, immunocytochemistry, LDH assays, and cell viability quantification

Mount Sinai Hospital, *New York City, NY* — Jun 2018–Dec 2019
Neuroendocrine Research Assistant

- Developed novel ECI tissue clearing protocols in murine pancreatic and pituitary tissue
- Profiled neuroendocrine pathways disrupted by repeated hypoglycemia in diabetic mice
- Utilized immunohistochemistry, murine models, confocal microscopy, ImageJ, and Prism8 analyses

LEADERSHIP AND INVOLVEMENT

University of Southern California, *Los Angeles, CA* — Sep 2020–Present
Associated Students of Biomedical Engineering

- Collaborate with biomedical engineers to help organize student-led social events

TECHNICAL SKILLS

Python • MATLAB • SolidWorks • QSR • DV&V • ImageJ • SQL • R • Organs-on-Chip • Microsoft Excel • Adobe Suite