

CHELSEA LANG

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EDUCATION

University of California, Riverside
B.S. Bioengineering

June 2020
Major GPA: 3.60

EXPERIENCE

Engineer I (Sustaining R&D) | *Edwards Lifesciences*

Jul 2021 – Present

- Develop, evaluate, and report device performance testing through design verification studies
- Maintain accurate documentation of concepts, designs, drawings, and procedures
- Perform root cause analysis and engineering studies to estimate design variation and develop acceptable design specifications
- Coordinate with lab technicians to carry out feasibility and design verification testing by providing instructions and trainings
- Assist in qualification of supplier material changes for legacy products in Critical Care product portfolio
- Serve as the technical lead on a cross functional team to drive several product lines into ISO 80369 compliance
- Liaise with EQL team to support several biocompatibility studies and ensure project deliverables are met

Engineering Technician | *B. Braun Medical Inc.*

Aug 2020 – Jul 2021

- Conducted routine physical tests, developed Gage R&R studies on test methods, and reported test data and analyses using controlled laboratory notebooks and Minitab
- Designed parts in SolidWorks as solutions for new product fixturing to interface between lab equipment and test samples
- Coordinated with engineers to execute and refine test protocols and generate summary reports

Bioprocess Engineering Intern | *Keck Graduate Institute*

June 2019 – Aug 2019

- Performed seed trains and scale-ups of CHO-S cells to determine optimal growth rates
- Served as a project manager for a group of 16, acting as a liaison between the group coordinator, lab manager, and my team
- Designed shake flask experiments focused on optimizing growth of mammalian cells with different mediums and feeding strategies such as fed-batch, batch, and perfusion

Teaching Assistant for ARC035 | *Academic Resource Center, UCR*

May 2019 – Apr 2020

- Led informational lab discussions online for up to 22 undergraduate students in intermediate algebra
- Prepared and developed lesson plans that correspond to the materials taught during lecture
- Assisted faculty members with proctoring exams, record keeping, and tracking attendance

Project Lead | *Biomedical Engineering Society, UCR*

May 2019 – June 2020

- Developed COMSOL curriculum for fellow undergraduates by teaching steps for building a solid and fluid mechanics model
- Designed computational and data analysis workshop series by introducing basic concepts of MATLAB, R, and Python
- Coordinated with UCR Bioengineering faculty to ensure accuracy of material taught

Research Assistant | *Kids Interaction Neurodevelopment Lab, UCR*

Oct 2018 – June 2020

- Designed psychophysics experiments using Psychtoolbox in MATLAB and E-Prime 2.0
- Analyzed, organized, and coded experimental data from Qualtrics and MATLAB in Excel, SPSS, and R
- Spearheaded independent research project studying anxiety-related biases in emotion recognition and presented findings at WPA Conference 2020, R'PSYC Symposium 2020, and UCR Undergraduate Research Symposium 2020

PROJECTS

MedAlarm

- Created a pills dispenser to ensure that medications are taken properly and on time
- Developed a built-in programmable timer using Arduino IDE code including LED screen that outputs time since last dosage
- Awarded 2nd place at BioHack hackathon 2018 by a judging panel of UCR faculty and industry professionals

Heart Rate Detection Using Photoplethysmography (PPG)

- Detected blood volume changes in the microvascular tissue by measuring infrared light reflected on subject's finger
- Consisted of TCRT1000 sensor, composed of an infrared diode light source and a phototransistor light detection circuit
- Measured frequency of filtered waveforms using Arduino to determine subject's heart rate

SKILLS

- **3D Modeling:** SolidWorks (CSWA), AutoCAD, Finite Element Analysis (FEA), Computational Fluid Dynamics (CFD)
- **Software:** Minitab, MATLAB, COMSOL, Arduino, LabView, PSpice, Microsoft Office Suite
- **Programming:** Python, R, SPSS, C/C++, HTML/CSS