CHELSEA LANG

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EDUCATION

University of California, Riverside — **June 2020**
B.S. Bioengineering — **Major GPA: 3.60**

WORK EXPERIENCE

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

Research Assistant | *Kids Interaction Neurodevelopment Lab* — **Oct 2018 – June 2020**
- Designed psychophysics experiments using Psychtoolbox in MATLAB and E-Prime 2.0
- Administered physiological assessments to undergraduate students in a laboratory setting following a precise protocol
- Analyzed, organized, and coded experimental data from Qualtrics and MATLAB on Microsoft Excel and SPSS

Campus Tour Guide: Engineering Ambassador | *Undergraduate Admissions, UCR* — **Aug 2018 – Feb 2019**
- Provided tours of the engineering labs in the Marlan & Rosemary Bourns College of Engineering to prospective students
- Assisted in creating a tool to easily schedule shifts for a total of 40 tour guides and engineering ambassadors
- Staffed front desk by checking in guests, performing data entry, and providing office support

LEADERSHIP

Sponsorship Lead | *BioHack* — **Sep 2019 – May 2020**
- Led a team of 5 individuals to outreach to, organize, and allocate sponsors and funding for an annual hackathon
- Maintained lasting relationships via email and phone with previous company representatives while finding new sponsors
- Created the sponsorship packet by organizing the structure of sponsorship tiers

President & Founder | *Neurotechnology at UCR* — **Jul 2019 – June 2020**
- Prepared and presented during general meetings and outreach events on topics in neurotechnology
- Managed administrative affairs including the website, emails, weekly newsletters, and recruitment
- Built a noninvasive BCI system that uses detection of the brain's alpha waves to turn a LED light on and off

Project Lead | *Biomedical Engineering Society* — **May 2019 – June 2020**
- Designed 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

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

Technical Skills
- SolidWorks, AutoCAD, Finite Element Analysis (FEA)
- MATLAB, COMSOL, Arduino, LABView, PSpice
- Python, R, SPSS, C/C++, HTML/CSS, Microsoft Office Suite

Laboratory Skills
- Bradford Assay, ViCell Analyzer, Nova, Osmometer
- Fluorescent microscopy, ImageJ, SEM, TLC Analysis
- PCR, Gel Electrophoresis, IR/NMR Spectroscopy