Elizabeth Wang

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EDUCATION

UC BERKELEY
B.S. Bioengineering
Minor: Electrical Engineering & Computer Science
Graduating May 2021
Cum. GPA: 3.60 / 4

COURSEWORK

UNDERGRADUATE
Microfabrication Technology
Microelectronic Devices & Circuits
Integrated-Circuit Devices
Designing Information Devices & Systems
BioMEMS & Medical Devices
Instrumentation in Biology & Medicine
Principles & Techniques of Data Science
Artificial Intelligence
Data Structures
Prototyping & Fabrication

SKILLS

PROGRAMMING
Python (Pandas, Pytorch, SKLearn)
Java
C & C++
SQL
MATLAB
HTML
CSS

ELECTRICAL
Circuit Analysis & Debugging
MEMS Fabrication & Testing
MOSFET Design & Simulation

CAD SOFTWARE
SolidWorks
AutoDesk Fusion
Adobe Illustrator

WET LAB
Mice Handling (IP & IV injections, dissections, tumor implantation)
Cell & Tissue Culture
Sterile/Aseptic Technique

WORK EXPERIENCE

RESEARCHER | Lawrence Berkeley National Laboratory
May 2018 - Present
- Investigated the pharmacokinetics & pharmacodynamics of radioactive antibody-drug conjugates in small cell lung cancer tumor mice models
- Secured $6000 grant to execute a full-length biodistribution study
- Slashed the price of custom-designed microPET phantom from $2000 to $50

EECS 16B LAB TEACHING ASSISTANT | UC Berkeley Electrical Engineering & Computer Science
January 2020 - Present
- Guided students through debugging circuitry and Python and C/C++ code
- Helped student understand filters, modeling, dynamics, and controls

INTERN | Biodesign Immersion Experience
May 2020 - Aug 2020
- Conducted over 30 interviews to pinpoint the needs of various stakeholders in the hydrocephalus community

PROJECTS

MEMS DEVICES & CHARACTERIZATION
- Fabricated MOS transistors and poly-Si surface microstructures
- Characterized electrical/mechanical performance of devices

SIXT33N VOICE-CONTROLLED CAR
- Designed filters to process and amplify input microphone signals
- Regulated motor drivers with a closed loop control system
- Implemented Principal Component Analysis for voice command recognition

OPTIMIZATION OF N-CHANNEL SI-MOSFET
- Co-optimized channel/body dopant concentration, junction depth, and spacer length in a simulated n-channel silicon MOSFET

PERPETUAL CALENDAR
- Laser cut, sanded, and stained an adaptable, monthly calendar design
- Devised custom hooks for ease of mounting onto a loft bed frame

EXTRACURRICULARS

PROJECT COMMITTEE CHAIR | Bioengineering Honor Society
- Built a 3D printed hand whose motions were remotely controlled through the use of an Arduino and flex sensors
- Hosted Arduino, Computer Aided Design, and Rapid Prototyping workshops

COMPETITIVE BOXER | Cal Boxing Club
- Led conditioning sessions twice a week, in addition to attending two-hour practices four times a week