ARLETTE GELLER

+1 (786) 797 7026 - Email - LinkedIn - Portfolio
Languages: Spanish, English, and Hebrew - **US Citizen**

EDUCATION

Master of Engineering in Biomedical Engineering, Certification: Medical Device Design — ***Fall 2020 - Fall 2021***
Duke University, Durham, NC - GPA 3.5
Bachelor of Science in Biomedical Engineering — ***Spring 2017 - Fall 2020***
Arizona State University, Tempe, AZ - Major GPA 3.73 **Cum Laude**

PROJECTS, RESEARCH AND WORK

Calla Health Foundation

Junior Engineer — ***Spring 2022***
Completing engineering design, medical device validation studies, management on quality control of manufactured devices, written reports, data analysis and data dissemination, grant writing; and other

Biomedical Engineer Intern — ***Fall 2021***
Designed portable testing platform for quality testing of device specifications, development of packaging, labeling, manual, etc. Material analysis for product life-cycle and reprocessing assessment

Duke University

Research Assistant - Global Women's Health Technologies Lab — ***Spring 2021 - Fall 2021***
Created portable staining platform for cervical biopsy analysis

Research Assistant - Eric S. Richardson Ph.D.
~ Designing technology to tackle healthcare workers negative effects of long-term use of surgical masks — ***Fall 2020 - Fall 2021***
~ Design of validation tests for orthopedic surgical helmet manifold efficacy under COVID-19 pandemic, by designing, conducting, participating in trial and as an author of the paper for the Journal of Arthroplasty — ***Spring 2021 - Summer 2021***

Fellow - Design+Health Program — ***Fall 2020 - Spring 2021***
Worked with an interdisciplinary team to design and develop drainage system
US Provisional Patent - Device and Method of Managing Fluid Collections 4-29-2021

Advanced Manufacturing and Prototyping — ***Fall 2020***
~ **Speculum** - Developed unique silicon, disposable, and adaptable to different body sizes speculum; inspired in stent deployment systems
~ **Mitral Valve Sewing Ring** - 3D-custom-modeled sewing ring from MRI
~ **Cystoscope** - Created a patient-friendly device for injection molding and large scale manufacturing

Arizona State University

Senior Capstone Project - At-home breast cancer screening device — ***Fall 2019 - Spring 2020***
Prototyped and tested device for early stage tumor detection through impedance measurements of tissues present in the breast, for use between regular check-ups

Instrumentation for Biomedical Engineers - High spinal cord injuries assistive technology — ***Fall 2019***
Built device to allow these individuals use computers on their own. Included a headband and a mouthpiece, and a software that provided the cursor the function to clic and navigate the screen

Microcomputing Engineering Project - Pen plotter machine — ***Spring 2019***
Manufactured device to help individuals with motor disabilities write cursive through speech

Rehabilitation Center Product Design - Vagus nerve stimulation device — ***Spring 2019***
Designed portable non-invasive vagus nerve stimulator system for remote stroke patients' rehabilitation.

Research Assistant, Locomotion Research Lab - Thurmon E. Lockhart Ph.D — ***Spring 2017 - Fall 2019***
Contributed in gait data acquisition and analysis, and as a co-author in elderly fall risk assessment study

LEADERSHIP, CERTIFICATIONS, AWARDS, AND EXPERIENCES

Duke University

President, Engineering Master's Student Council — ***Fall 2021***
Biomedical Engineering Intern, Calla Health Foundation — ***Summer 2021***
Vice-President/Co-Founder, Engineering Master's Student Council — ***Fall 2020 - Spring 2021***

Arizona State University

Mentor, Biomedical Engineering Society — ***Spring 2017 - Spring 2019***
Inflatable Birthing Cushion, Earned award for most interesting project for women in the DRC — ***Fall 2017***
CITI Program, Research, Ethics and Compliance Training Completion — ***Fall 2017***

Lima, Peru

Medical Translator in Operation Room, Rotary Club; Operation Smile — ***2016***

TECHNICAL SKILLS

PROTOTYPING AND ANALYTICS Slicer, SolidWorks, Shapr3D, Fusion360, DFM and DFA for Medical Devices, QuickField, FEA, CFD, SPSS, G*Power, Photoshop, FMEA, FMECA
ELECTRONICS LTSpice, LabView, Biosensors, Arduino, BJTs, MOSFETs, Integrated-Circuit Amplifiers, Filters, Analog and Digital Integrated Circuits
COMPUTATIONAL Machine Learning Techniques, Anaconda, MathCAD, MATLAB, C++, Python, Git, Software Unit Testing, Pycharm, VSC