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 — ***2021***
Duke University, Durham, NC - GPA 3.5
Bachelor of Science in Biomedical Engineering — ***2020***
Arizona State University, Tempe, AZ - Major GPA 3.73 **Cum Laude**

PROJECTS, RESEARCH AND WORK

Independent Work

Speculum Alternative — ***2021 - Present***
Working on patent pending technology: Adaptive and radially expanding disposable speculum; and designing the clinical study for customer feedback to finalize device specifications

Calla Health Foundation

Junior Engineer — ***2022***
Completed 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 — ***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

Contractor - Center for Global Women's Health Technologies — ***2022***
Development of validation platform, training materials, and quality testing and validation of Pocket colposcope device for research collaborations and future commercialization

Research Assistant - Center for Global Women's Health Technologies — ***2020 - 2021***
Created and optimized portable staining platform for cervical biopsy analysis upon user requirements

Research Assistant - Eric S. Richardson Ph.D.
★ Designed technology to tackle healthcare workers negative effects of long-term use of surgical masks — ***2020 - 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 — ***2021***

Fellow - Design+Health Program — ***2020 - 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 — ***2020***
★ **Speculum** - Developed unique silicon, disposable, and adaptable to different body sizes speculum
★ **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 — ***2019 - 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 — ***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

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

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

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

LEADERSHIP, CERTIFICATIONS, AWARDS, AND

Duke University

President, Engineering Master's Student Council — ***2021***
Vice-President/Co-Founder, Engineering Master's Student Council — ***2020 - 2021***

Arizona State University

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

Lima, Peru

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

TECHNICAL SKILLS

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