ARLETTE GELLER

MEDICAL DEVICE DESIGN ENGINEER

Portfolio* Mobile* Email* LinkedIn*

EN - ES - HEB

EDUCATION

Duke University Durham, NC

Master of Engineering in Biomedical Engineering* - Pratt School of Engineering GPA 3.5 — 2021

Certificate in Medical Device Design* - Department of Biomedical Engineering — 2021

Arizona State University Tempe, AZ

Bachelor of Science in Biomedical Engineering* - Ira A. Fulton School of Engineering GPA 3.73 - Cum Laude — 2020

PROJECTS, WORK AND RESEARCH EXPERIENCES

Medical Device Consulting*

Providing consulting services in many areas of work related to medical device design and development. — 2022

Women's Health

Patent Pending Technology* - EFS ID: 44679090

Developed adaptive and radially expanding disposable speculum. Designing clinical study for design validation and modification. — 2021 - Present

Calla Health Foundation

♥ **Junior Engineer*** - 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. — 2022

♥ **Biomedical Engineering Intern*** - 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. — 2021

Center for Global Women's Health Technologies

♥ **Contractor*** - Development of validation platform, training materials, and quality testing and validation of Pocket colposcope device for research collaborations and future commercialization. — 2022

♥ **Research Assistant*** - Created and optimized portable staining platform for cervical biopsy analysis upon user requirements. — 2020 - 2021

Duke University

Eric S. Richardson Ph.D.

♥ **Validation Study*** - Design, execution and publishing physiological and particulate validation studies for orthopedic surgical helmet manifold modification efficacy under COVID-19 environments. — 2021

♥ **Independent Study** - Designed technology to tackle negative effects of long-term use from surgical masks by healthcare workers. — 2020 - 2021

Design+Health Program

Fellow* - Worked with an interdisciplinary team to design and develop intermittent drainage system. — 2020 - 2021

US Provisional Patent - Device and Method of Managing Fluid Collections 4-29-2021

Advanced Manufacturing and Prototyping

♥ **Speculum*** - Developed unique silicon, disposable, and adaptable to different body sizes speculum. — 2020

♥ **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

Capstone Project

At-home Breast Cancer Screening Device* - Developed portable device concept for early stage tumor detection through impedance measurements. — 2019 - 2020

Instrumentation for Biomedical Engineers

High Spinal Cord Injuries Assistive Technology* - Built device to allow individuals use the computer on their own through a headband for screen navigation, and a mouthpiece as the click functionality. — 2019

Microcomputing for Biomedical Engineers

Pen Plotter Machine* - Manufactured device to help individuals write cursive through speech. — 2019

Product Design and Development III

Vagus Nerve Stimulation Device* - Designed portable non-invasive vagus nerve stimulator system for remote stroke patients' rehabilitation. — 2019

Locomotion Research Lab

Research Assistant - Contributed in gait data acquisition, processing, analysis, and as a co-author for: — 2017 - 2019

Nonlinear Evaluation of Gait in Older Fallers and Non-Fallers*

LEADERSHIP AND AWARDS

Duke University

Master's of Engineering Hooding Ceremony Speech* — 2022

Duke University Engineering Master's Student Council

President — 2021

Vice-President and Founding Member — 2020 - 2021

Arizona State University

Biomedical Engineering Society - Mentor — 2017 - 2019

Most Interesting Project Award - Inflatable birthing cushion design for at-home labor assistance in the DRC. — 2017

CITI Program - Research, Ethics and Compliance Training Completion — 2017

Rotary Club Lima, PE

Operation Smile - Medical Translator at Operation Room — 2016

TECHNICAL SKILLS

Slicer, SolidWorks, Shapr3D, Fusion360, Blender, QuickField, FEA, SPSS, G*Power, Photoshop, FMEA, FMECA, LTSpice, LabView, Biosensors, Arduino, Integrated-Circuit Design, Machine Learning Techniques, Anaconda, MathCAD, MATLAB, C++, Python, GitHub, Software Unit Testing, Pycharm, Visual Studio Code

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