ARLETTE GELLER

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

EDUCATION

Master of Engineering in Biomedical Engineering — **Fall 2020 - Fall 2021**
Concentration: Medical Device Design **Certification:** Medical Device Design
Awarded funding to gain experience in BME research lab
Duke University, Durham, NC - GPA 3.35

Bachelor of Science in Biomedical Engineering — **Spring 2017 - Fall 2020**
Arizona State University, Tempe, AZ - Major GPA 3.73 **Cum Laude**

TECHNICAL SKILLS

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

PROJECTS AND RESEARCH

Duke University

Research Assistant - Nimmi Ramanujam Ph.D. — **Spring 2021 - Present**
Global Women's Health Technologies Lab - Designing biopsy staining platform for cervical cancer diagnosis.

Research Assistant - Eric S. Richardson Ph.D.
- Working along the design and engineering team of the 3D-printed Surgical Helmet Intake Manifold verification and validation processes, and documentation — **Spring 2021 - Present**
- Designing technology to tackle long-term effects of surgical masks — **Fall 2020 - Present**

Design+Health Fellow - Collaborating with an interdisciplinary team working on research, design and development of drainage system — **Fall 2020 - Present**

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

Computational Linear Algebra - Applied machine learning techniques including classification, clustering, regression, feature engineering; to create prediction model for medical dataset — **Fall 2020**

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 for use between regular check-ups, to decrease costs of treatment and improve life prognosis

Instrumentation for Biomedical Engineers - High spinal cord injuries assistive technology — **Fall 2019**
Built assistive device to help people with high spinal cord injuries use computers on their own. Included a force sensor and an accelerometer in a headband. Used LabView to create software to allow users to click and move cursor with their head and mouth

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

Rehabilitation Center Product Design - Vagus nerve stimulation device — **Spring 2019**
Lead a team of four to design portable non-invasive vagus nerve stimulator system for remote stroke patients' rehabilitation. Increased recovery rate, eliminated need for surgery, and reduced labor cost. Voted by peers to pursue development of technology in the UK

Research Assistant, Locomotion Research Lab - Thurmon E. Lockhart Ph.D — **Spring 2017 - Fall 2019**
Contributed in the process and analysis of data, literature reviews, while learning software and hardware used to develop study for nonlinear evaluation of gait in older fallers vs. non-fallers for fall risk assessment

Product Design for Underserved Populations - Created inflatable birthing cushion prototype to provide women in the DRC a safer and more comfortable way to give birth on their own and decrease newborn mortality. Awarded as most interesting project — **Fall 2017**

LEADERSHIP, CERTIFICATIONS AND EXPERIENCES

Duke University

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

Arizona State University

Mentor, Biomedical Engineering Society — **Spring 2017 - Spring 2019**

CITI Program, Research, Ethics and Compliance Training Completion — **Fall 2017**

Lima, Peru

Clinical Laboratory Intern, Andina Laboratorio — **Summer 2018**

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

Counselor and Mentor, Hanoar Hatzioni B'Peru; Activist Youth Movement — **2013 - 2015**