

Santiago Fossi

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Engineering student and researcher on his last term who looks to use and improve his experience in an established engineering company. He is an eager and quick learner, who is very adaptable and has a formidable work attitude.

Educations and Awards

Florida International University Bachelor's Degree in Biomedical Engineering	2018 – 04/2021
GPA: 3.43/4.0 Graduation: 04/2021	
Broward College Associates Degree	Fall 2017
FIU Dean's List	Summer 18', 19, Fall 18', Spring 19'

FIU CURE Program Scholar Researcher **Fall 2019 – Fall 2020**

- Presented my research from VCC Lab (see below) in the FIU Undergraduate Research Symposium

Industry and Research Experience

SYNTHEON, LLC – R&D Technician – Surgical Technology	01/2021 – Present
PhysicalOne – CAD and Fabrication – CAD Designer	10/2020 – Present
<ul style="list-style-type: none">Studied mechanical drawings of the prototype to analyze and discuss faults and improvables in the systemConceptualized and redesigned a lock in plug mechanism to reach spec requirement of 50 lbs pull-out forceReconsidered material combinations to get closer to spec and maintain manufacturability (prototyping)Designed each revision on SolidWorks while maintaining ease of fabrication (DFM) and user friendliness in mind.	
CORDIS – Manufacturing Technician – Negative Pressure Wound Therapy	09/2020 – 12/2020
<ul style="list-style-type: none">Assisted the manufacturing of NPWT devices through assembling, testing, labeling, programming, calibrating, documenting and organizing of different components of the medical systemUsed manometer to test pressure settings, possible occlusions, and flow rates of device and tubing, used power tools such as solder iron to restore connections and drills to assemble deviceUnderstood the final steps and standards of product supply chain in assembling, packaging and QC inspectionsMaintained GDP's while completing all relevant documentation during tests and inspections	
ETHICON – Johnson & Johnson – R&D Co-op – Electromechanical Surgical Devices	Spring 2020
<ul style="list-style-type: none">Performed DOE analysis and trials to optimize parameters to ultrasonic welding processes of surgical staplerTrained and practiced compression, tension (MTS/INSTRON), torsion, tissue, package testing. Made fixtures to accommodate tests. Wrote TestWorks program for compression and tension testing machinesAnalyzed data obtained from aged samples finding emerging trends. Wrote technical documentations and performed corresponding protocols and engineering study experiments assisting MR validations, regulationsCompleted tolerance, root cause, GR&R, 6σ, 3D printing courses. Welded around 200 devices	
FIU – Bio-electronic Implants Lab and Visual Cortical Circuits Lab (VCCL) – Researcher	03/2018 – 12/2019
<ul style="list-style-type: none">Researched bio-electronic implants with wireless data and power telemetry, materials engineering, electronic packaging, hermeticity, electroplating, electrical and thermal simulations, power efficiencyBuilt a 4f optical microscope attachment to image at different depths of the brain at near simultaneous times	

Skills

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|--------------------------------|------------------------------------|---------------------------|
| • MATLAB, Image Processing | • SolidWorks, NX, TestWorks | • Mechatronics, Soldering |
| • Microsoft Office, Sharepoint | • ECG, EEG, MRI, CT, | • Minitab, SPSS, Stats |
| • Microcontrollers | • RCA, DOE, FEA, 6 σ , GR&R | • 3D printing, Imaging |

Presentations and Projects

Senior Design Project 3D printing Collaboration with Terumo Aortic Team Leader	Fall 2020–Present
<ul style="list-style-type: none">Designed, fabricated text fixture supporting flow simulation. Completing all documentation and verification testing	
Quadcopter Drone with Spotlight	Fall 2019
<ul style="list-style-type: none">4 team mates and I collaborated to build and program an Arduino microcontroller based drone with four propeller motors, speed controllers, receiver, RC transmitter controller, gyroscope adjustment, and a spotlight.	
Viscoelastic Model of Cardiac Tissue	Summer 2019
<ul style="list-style-type: none">Modeled three layers of cardiac tissue using viscoelastic models derived from Maxwell and Kelvin equationsUsed model to derive differential equations and solve for them for conditions of stress, relaxation, and creep	
Computational Model of Insulin pump	Spring 2018
<ul style="list-style-type: none">Simulated the bodies of a diabetic human breaking down glucose and a healthy human breaking down glucose regularly and solved differential equations representing glucose concentration to tell when to release insulin	