

# Shannya Niveyro

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## EDUCATION

### Columbia University, Coding Bootcamp

Certification in Full-Stack Web Development (*in progress*)

Expected: April 2023

### Hofstra University, Fred DeMatteis School of Engineering and Applied Science

Bachelor of Science in Bioengineering

Graduation: December 2022

Concentration: Biomechanics, Minor: Mathematics

Cumulative GPA: 3.1

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## RELEVANT EXPERIENCE

### Hofstra University, Hempstead, NY

*Teaching Assistant*

September 2022 - December 2022

- Aided the professor in the Engineering Design Lab with the administration of projects and assignments and helped students through their designing, assembly, and testing of projects.

### Stony Brook University, Stony Brook, NY

*Research Assistant*

May - September 2022

- Worked in Dr. Gabor Balazsi's Bioengineering Lab under a post-doctorate and Ph.D. student on distinct projects a microscope enclosure, CAD files for micropatterns, performing the procedure to create the micropatterns, and the drawing, prototyping, and testing of parts to clean the tips for a Fluid Atomic Force Microscopy machine using Fusion 360, laser cutting, and a CNC machine

### Springboard Incubators, Hempstead, NY

*Electrical Engineering Instructor, Program Coordinator*

February - September 2022

- Designed curriculum and taught STEM courses in topics like CAD, circuits, Arduino, etc. to students and for workforce development
- Spoke with schools to make professional relationships for them to acquire our services

### United Therapeutics Corporation Regenerative Medicine Lab, Research Triangle Park, NC

*Biomedical Engineering Co-op*

July 2021 - January 2022

- Worked on a team with engineers supporting scientists in the decellularization and recellularization of porcine lungs
- Learned about equipment, skills, and techniques I mastered with experience including laser cutting, 3D printing, and the assembly of my own designs made in SolidWorks
- Aided in test engineering, electrical work, and wet lab experiments
- Managed projects from design, to assembly, testing, and delivery to scientists

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## ACADEMIC PROJECTS

### *Vascularized Islet Organ*

September - November 2020

- Designed a VIO and protocol to decellularize rat lungs to use as a scaffold to grow islet cells on and prevascularize the cells *ex vivo*; the purpose of the VIO is to reimplant the cells on the lung scaffold for it to produce insulin in the body and therefore possibly cure Type 1 Diabetes

### *Smart Insulin Patch*

March - May 2019

- Researched past insulin patches and designed a longer-lasting insulin patch to treat Type 1 Diabetes
  - Designed an experiment to test the improved patch and predicted the results
  - Created an AutoCAD drawing for the new design with a greater surface area, longer microneedles, and an increased amount of them
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## SKILLS

- Proficient in CAD(SolidWorks, AutoCAD, Fusion360) and JavaScript
  - Intermediate skills with MATLAB and python
  - Experience with software such as ImageJ, Matlab, AutoCAD, LabView, and COMSOL
  - Experience using a Computer Numerical Control machine, 3D printing (FDM, SLA, and SLS), and laser cutting
  - Data Analysis
  - Teamwork
  - Experience with techniques such as Cell Passaging, PDMS production, decellularizing tissue, DNA staining, making micropatterns, and test engineering
  - Fluent in Spanish
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## CAMPUS INVOLVEMENT

### SWE: Society of Women Engineers

September 2018-Present

- Attended the National Conference in Anaheim, California in November of 2019

### BMES: Biomedical Engineering Society

November 2019-Present

### CSTEP: Collegiate Science and Technology Entry Program

August 2018-Present

### ΘT: Theta Tau (Professional Engineering Fraternity)

February 2020-Present

- Served as Advertisement Chair for Fall 2020
    - In charge of social media for the organization for Spring 2021
  - New Member Educator for Fall 2022
    - Educated and organized a 10-member pledge class through their New Member Education process by leading weekly meetings and guided them professionally.
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## ACADEMIC AWARDS

### Presidential Scholarship

September 2018-December 2022

- Selected based on a holistic review of the information supplied on their admission application