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## EDUCATION

### University at Buffalo

*Bachelor of Science:* **Biomedical Engineering** August 2018 – May 2022  
Pre-Med Track | GPA: 3.35/4.0 | Honors: Deans List

*Masters of Arts:* **Biological Sciences** Expected May 2023  
Focus in Anatomy & Physiology

**Engineering Study Abroad** University of Technology Troyes, France Summer 2019

## SKILLS & CERTIFICATIONS

Solidworks Autodesk Fusion360 3D Printing Python MATLAB Casting & Molding PCR Assay's Microsoft Suite  
Basic Circuitry Cell Culturing Microscopy Research Laboratory Techniques Problem Solving Critical Thinking  
Leadership Adaptability Collaboration Prototyping Communication Creativity

## CERTIFICATIONS

Basic Life Support (BLS) for Healthcare Providers, American Red Cross COVID-19 Contract Tracing, Johns Hopkins University  
Electrocardiograms, Phlebotomy, and Cardiac Telemetry, St Peters Hospital Biomedical Research Investigators, CITI Program

## EXPERIENCE

**Cadaver Research** **University at Buffalo, NY** January 2021 – Present

- Dissected the leg and hand, focusing on the mechanics of the joints and musculoskeletal system
- Currently working on a full body dissection as well as a nervous system dissection

**ER Patient Care Technician** **St. Peters Hospital, NY** November 2020 – Present

- Assisted physicians in the Emergency Department with central lines, intubation, CPR/BLS, etc.
- Performed EKG's & phlebotomy on patients, and urine tests & COVID/Flu tests on patient samples
- Monitored cardiac telemetry and take the vitals of patients

**Assay Development Research Intern** **Lucira Health, CA** May 2022 – July 2022

- Performed guard banding to test the tolerance to variations in the elution buffer & pellet for the COVID-19 FLU A+B Test
- Utilized techniques such as PCR, fLAMP-assays, and DNA/RNA purification in a BSL2 environment under GXP

**Pathology Research** **University at Buffalo, NY** July 2020 – May 2021

- Assisted MD/PhD students on Piezo-1 subcellular compartmentalization in Smooth Vascular Muscle Cells
- Mimicked vascular diseases by use of Vascular Smooth Muscle Cells spheroids and Atomic Force Microscopy

## PROJECTS

[View Personal Website](#), featuring more projects, research, and information

**3D Printed, Anatomically Correct Hand for Surgical Training** September 2021 – Present

- Performed a cadaver hand dissection to aid in the anatomical accuracy
- Utilized Solidworks and Meshmixer to 3D print a CT of the hand, allowing it to be personalized to each patient
- One of two groups selected to present our 3D Printed Anatomically Correct Hand to the UB BME Advisory Board
- Coordinated design testing with the former Buffalo Bills Orthopedic Surgeon, fellows, and residents

**Total Ankle Replacement** February 2022 – May 2022

- Researched the most common reasons for a total ankle replacement to fail
- Proposed the solution of using the implant as an electrode and using ultrasound to prevent and kill infections
- Proposed the solution of using antiresorptive drugs and hydroxyapatite to prevent osteolysis

**Wind Turbine & First Year Engineering Award** September 2018 – December 2018

- Created the first power producing, horizontal wind turbine for UB's EAS199 seminar
- Worked in the machine shop to create curved wooden blades and a hexagonal base and top, which were patented
- Received an award for using only the materials provided, while also creating a functional horizontal turbine