Christina Holshue
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EDUCATION

Bachelor of Science, Major in Biomedical Engineering
Minor in Electrical and Computer Engineering **Anticipated May 2023**
Rowan University, Glassboro, New Jersey
GPA- 3.75, Dean's List (Fall 2019-Spring 2021)
Rowan Foundation Scholarship & Rowan Scholars Program Scholarship

RELEVANT EXPERIENCE

Undergraduate Student Researcher in Dr. Miri's Research Lab, Mechanical Engineering Department, Rowan University **Spring 2021-Winter 2022**

- Co-authored research paper to be published
- Cultured, studied, and made spheroids with sarcoma cells
- Captured Z-stack images of cancer spheroids using Nikon Eclipse Ti2 microscope
- Conducted live-dead staining experiments and processed live-dead images using ImageJ
- Edited and expanded MATLAB code to automatically process cell migration distance from images
- Conducted mass transfer diffusion experiments of RhB in hydrogels
- Wrote custom GCode for bioprinter to print dynamic 3D structures out of hydrogel

Student Worker for Electrical & Computer Engineering Department, Rowan University, Fall 2020-Present

- Maintained 3D printing fabrication center for Rowan University
- Enhanced 3D printer with a Raspberry Pi and camera module to print and monitor remotely
- Printed Rowan University community projects for classes and research

Personal Projects: Electronics & 3D Printing **Fall 2020-Present**

- Designed schematics and PCBs in DipTrace as well as milled and assembled the PCBs
- Created an automatic cat feeder, custom light up ornament, and acrylic light stand
- Designed fully analog hearing aid pendant
- Designed in Solidworks and 3D printed prototypes for personal and professional projects: prosthetic hand and arms for startup society, automatic cat feeder, and functional apparatuses for labs
- Designed, wrote, and taught electrical engineering labs for Electronics 1 class: automating V-I curves for diodes with MATLAB, exploring uses of different op amps, and reverse engineering old electronics

Engineering Clinic Design projects, Rowan University, Glassboro NJ **Fall 2020-Spring 2022**

- Created salt leached porous PCL scaffolds and explored the impact of different parameters- Spring 2021
- Redesigned 3D printed finger prosthetic for MedEast prosthetic company- Spring 2022

TECHNICAL SKILLS

Communication: Microsoft Office (Word, Excel, PowerPoint, Teams), Google Drive Suite
Design Tools/Software: CAD, SolidWorks, MATLAB, ImageJ, PrusiaSlicer, Cura, DipTrace, PCB Milling software
Mechanical Tools/Skills: Nikon Eclipse Ti2 microscope, confocal microscopy, SLA printer, FDM printer, bioprinter, PCB mill, laser cutter, surface mount and through hole soldering, basic laboratory equipment

COMMUNICATION, TEAMWORK, AND LEADERSHIP

- Completed semester-long, multidisciplinary team focused engineering design projects
- Student on multidisciplinary team that consist of collaboration, networking, and giving back to the community via engineering services, and food for students
- Wrote and presented progress reports, memos, and white papers
- Strong leadership and management skill from managing teams, planning projects, and presenting deliverables