

SNEHA RAJ

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Objective: Driven, organized, and creative engineering student seeking a summer internship to gain real-world experience in medical device product research and development.

EDUCATION

Johns Hopkins University

B.S. Biomedical Engineering, Minor in Computational Medicine

Expected May 2025

Baltimore, MD

Relevant Coursework: Linear Algebra & Differential Equations, Probability & Statistics, Statistical Physics, Systems & Controls, Structure of Materials, Biomaterials I

Skills: Cell Culture, Corrosion Studies, X-ray Diffraction (XRD), GDP, Microsoft Office, Excel, NetSuite, Mandarin (Intermediate), CAD (Creo Parametric, Solidworks), Arduino, GitHub, R & RStudio, MATLAB, Java

Honors/Awards: Dean's List Fall 2021 through Spring 2023

PROFESSIONAL EXPERIENCE

Minaris Regenerative Medicine

June 2022 – August 2022

Supplier Buyer Intern

Mountain View, CA

- Streamlined purchasing activities and managed materials for clinical labs, process development, and engineering groups
- Assisted in compliance investigations and finance inquiries, while enhancing inventory tracking systems
- Learned about Quality Control processes, and Documentation and Manufacturing Practices in cell manufacturing

STEM-Away

June 2021 – June 2022

Bioinformatics Intern

Remote

- Collaborated with a team of 12 members to develop sMAP, an R Shiny application enabling students to conduct microarray analysis without programming expertise
- Significantly contributed to the data importation and batch correction components of the transcriptomics pipeline
- Co-presented the project to STEM-Away mentors and external speakers, and co-authored a paper documenting sMAP's development and functionality

ACADEMIC EXPERIENCE

Weihs Research Group, Biomaterials Division

August 2022 – Present

Undergraduate Student Researcher

Baltimore, MD

- Conducting experiments and performing corrosion testing on magnesium alloys under conditions simulating the human body to evaluate corrosion rate and tensile strength, focusing on their suitability for orthopedic applications
- Utilizing CAD software to design fixtures for wires to be used in MTS tensile machine and characterizing materials with XRD
- Showcased research findings through a poster presentation at the JHU 2023 Department of Medicine & Whiting School of Engineering Research Retreat

JHU Design Program, Improved Efficiency in Biceps Tenodesis Surgery

January 2023 – Present

Design Team Leader

Baltimore, MD

- Spearheading a 5-member team to conduct in-depth research on the current landscape of bicep tendon repair instrumentation, identifying potential areas for innovation
- Collaborating closely with faculty and clinical mentors; developing action plans and delegating tasks to team members

JHU Design Program, DiscovEAR

January 2022 – Present

Design Team Member

Baltimore, MD

- Collaborating with 5 students to design and validate an endoscopic system for diagnosing eustachian tube dysfunction
- Utilizing CAD and multiple 3D printing techniques to create distal attachments for endoscopes, enhancing visualization
- Developing and executing test protocols using bovine and human cadaver models
- Preparing a comprehensive research paper documenting the project's results and engaging with the campus technology ventures office to explore potential licensing opportunities

CAMPUS INVOLVEMENT

JHU MedTech Network

September 2021 – Present

President

Baltimore, MD

- Lead a 25-member student team, coordinating committees and overseeing event planning and execution for medtech career exploration, encompassing workshops, speakers, networking sessions, and entrepreneurship events.
- Refine event concepts in collaboration with faculty mentors, incorporating their guidance to enhance event impact.