SNEHA RAJ

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Objective: Driven, organized, and creative engineering student seeking to gain real-world experience in medical device product design and entrepreneurship.

EDUCATION

Johns Hopkins University **Expected May 2025**
B.S. Biomedical Engineering, Minor in Computational Medicine Baltimore, MD

Relevant Coursework: Linear Algebra & Differential Equations, Systems & Controls, Structure of Materials, Biomaterials I, Intro to Computational Medicine: Imaging, Biomedical Data Science

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, Python

Honors/Awards: Dean's List Fall 2021 through Spring 2023, Provost's Undergraduate Research Award 2023-2024

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 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 research through literature, clinician interviews, and shadowing 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 research paper and engaging with the campus technology ventures office to explore licensing

PROFESSINAL 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 an R Shiny application enabling microarray analysis without programming expertise
- Co-presented the project to external speakers, and co-authored a paper documenting sMAP's functionality

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

Alpha Kappa Psi, Business Fraternity **February 2022 – Present**
Philanthropy Chair Baltimore, MD

- Spearhead the ideation and planning of various fundraising and local volunteering