

Hanad Ali

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EDUCATION

University of North Carolina at Chapel Hill – Chapel Hill, NC

May 2028

Bachelor of Science in Biomedical Engineering

Relevant Courses: Calculus-based Mechanics and Special Relativity, Introduction to Scientific Programming

Charlotte Engineering Early College – Charlotte, NC

May 2024

Cumulative GPA: 3.8

Honors: A-Honor Roll, National Honor Technical Society, Goodwein Messiner Recipient, Questbridge Finalist

SKILLS

Medical device design, Wearable health technology, Prototyping, FDA regulatory standards, Project management, Cross-functional collaboration, CAD, Python, R programming, Statistical analysis, Data visualization

EXPERIENCE

Bai Lab @ Department of Applied Sciences at UNC – Chapel Hill, NC

June 2025 – Present

Research Assistant

- Contributing to biomedical imaging research focused on detecting non-metallic biodegradable magnets implanted in cardiac tissue using advanced camera systems.
- Designing and optimizing a 64-channel signal acquisition system in Altium Designer, upgrading from a 21-channel prototype to improve resolution and performance.
- Collaborating with interdisciplinary teams to integrate hardware improvements with biological modeling and imaging algorithms, supporting experimental validation and system refinement.

Black Muslim Collective – Chapel Hill, NC

Apr 2025 - Present

Treasurer

- Manage organizational finances, including budgeting, expense tracking, and financial reporting, ensuring fiscal responsibility and transparency.
- Collaborate on strategic planning as a key member of the executive board, contributing to decision-making and long-term goals.
- Oversee fundraising initiatives and allocations, helping secure resources and optimize funding for programs and events.

East African Student Organization – Chapel Hill, NC

Oct 2024 – Apr 2025

Freshmen Representative

- Helped expand and increased awareness of the organization, fostering a welcoming community for East African students
- Planned and executed events, initiatives, and outreach programs to support freshmen engagement and cultural connection
- Served as a liaison between freshmen and leadership, ensuring their needs are represented in organizational planning

Raytheon Technologies – Remote

June – July 2023

Raytheon Technologies Future Ready Engineers Program Intern

- Developed and implemented a Man-in-the-Middle (MITM) attack simulation to analyze vulnerabilities and countermeasures
- Designed a firewall with Intrusion Prevention System (IPS) and encryption/decryption to mitigate MITM attacks
- Researched and enhanced network security protocols to improve threat detection and prevention

PROJECTS

NeoDialyzer

Aug 2023 – May 2024

- Conducted extensive research on dialysis technology, market needs, and regulatory requirements to ensure feasibility and innovation
- Created technical documentation, CAD models, and annotated sketches to guide prototype development and testing
- Engineered a lightweight, backpack-style dialysis system, incorporating reusable dialysate filtration to reduce overall weight from 264 lbs to ~40 lbs placing 3rd place at engineering expos and competitions