

SUMMARY

R&D-focused Biomedical/Mechanical Engineer with practical experience in design, verification, and integration of implantable medical devices. Proficient in system decomposition, requirements traceability, and risk management within FDA-regulated environments. Committed to collaborative innovation, continuous process improvement, and delivering safe, reliable medical technologies that enhance patient outcomes.

EDUCATION

<b>The University of Texas at Arlington</b> Arlington, TX	B.S. in Biomedical Engineering   GPA: 4.0   Graduation Date: May 2023
<b>Southern New Hampshire University</b> Manchester, NH	B.S. in Computer Science   GPA: 4.0   Graduation Date: Dec 2024

JOB EXPERIENCE

<b>Product Development Engineer I</b> <i>Resolution Medical</i>	2023– Present
<ul style="list-style-type: none"><li>Performed system-level design verification and testing for implantable neurostimulation and BCI devices, including hydraulic, mechanical fatigue, and accelerated aging tests aligned with FDA/ISO compliance.</li><li>Developed and executed traceability matrices linking user needs, system requirements, and design verification protocols to ensure design outputs met inputs.</li><li>Designed custom test fixtures and prototypes simulating biological environments; applied system thinking to integrate electrical, mechanical, and software interfaces.</li><li>Authored and maintained design history files, risk control documentation, and engineering reports in collaboration with regulatory and QA teams.</li><li>Contributed to cross-functional technical decisions including tolerance analysis, material selection, supplier evaluation, and DFM analysis.</li><li>Supported preclinical animal studies with real-time engineering support, using feedback to refine product usability and risk mitigation strategies.</li><li>Created detailed system architecture drawings and performed subsystem integration to ensure functional reliability under surgical use conditions.</li></ul>	

PROJECT

<b>Head Motion Tracker System Design</b> <i>Course Project — The University of Texas at Arlington</i>
<ul style="list-style-type: none"><li>Developed a real-time motion tracking system for clinical monitoring using Arduino-integrated sensors and Python/MATLAB-based signal processing.</li><li>Led system integration between sensors, software, and enclosures to meet ergonomic and durability constraints in medical settings.</li><li>Applied engineering best practices in rapid prototyping, subsystem interfacing, and safety-focused system testing.</li></ul>

Johnson & Johnson robotics and controls job simulation

<i>Forage - June 2025</i>
<ul style="list-style-type: none"><li>Completed a job simulation as a robotics &amp; controls engineering intern at Johnson &amp; Johnson, focusing on optimizing a surgical robotic arm's performance.</li><li>Used Python-based tools to diagnose control system inefficiencies, identify root causes of delays, and implement targeted optimizations.</li><li>Proposed actionable design modifications using annotated technical visuals, validating their impact on responsiveness and durability through iterative testing.</li><li>Developed a professional design proposal outlining findings, solutions, and recommendations for improving precision and reliability in robotic systems.</li></ul>

TECHNICAL SKILLS

<ul style="list-style-type: none"><li>Testing &amp; Validation: Mechanical Fatigue, Hydraulic Testing, Accelerated Aging, Root Cause Analysis, Risk Mitigation</li><li>Design &amp; Engineering Tools: SolidWorks, DFM, BOM, Tolerance Analysis</li><li>Data &amp; Software: Python, MATLAB, Arduino, Minitab, LabVIEW</li><li>Cross-Functional: Technical Documentation, Agile, Supplier Collaboration, Preclinical Support</li></ul>
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