

Anudi Sirimanna

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Education

University of Waterloo

BASc in Biomedical Engineering, Honors, Co-op

2020 - 2025

- Colonel Hugh Heasley Engineering Scholarship
- President's Scholarship of Distinction
- Key Courses:** Human Factors, Biomechanics, Neuroscience, Rehab Engineering, User Experience, Medical Imaging

Work Experience

Veeva Systems

Associate QA Engineer

Jun 2025 - Present

- Authored comprehensive test plans, scripts, and bug reports to evaluate product quality and risk
- Executed functional QA testing—including edge cases, negative flows, and compatibility scenarios
- Collaborated within Agile sprints alongside engineers and PMs, developing deep expertise of the Campaign Manager product

Omniscient Neurotechnology

Systems Engineering Co-op

Jan 2024 - Aug 2024

- Managed Quicktome, a brain-mapping SaMD, driving 5 releases, leading standup, and maintaining the design history file
- Investigated product nonconformances and complaints, performed root cause analysis, supported **CAPA** initiatives, and escalated critical issues
- Maintained medical software standards (**IEC 62304, 21CFR, ISO 14971**) through design reviews, risk & requirement analyses, and SOP updates
- Lead the Continuous Improvement Program using dashboards and monthly reviews to streamline a lean QMS
- Performed formative/summative evaluations and authored a risk-based critical task file to conform to usability standards (**IEC 62366**)
- Developed a whitepaper exploring the viability of rs-fMRI and tractography for treating disorders of consciousness
- Collaborated on user & software requirements and risk management & usability plans for a new medical software

Vena Medical

Opto-Mechanical Engineering Co-op

May 2023 - Aug 2023

- Prepared the Vena MicroAngioscope, an endovascular catheter that visualizes blood clots for stroke treatment, for regulatory approval
- Authored design control documentation, including **uFMEA & pFMEA** risk analyses to support **FDA 510(k)** regulatory compliance
- Drafted a provisional patent application outlining engineering designs and functional improvements to enable continued product development
- Evaluated **ISO 13485, 8600** standards and collaborated with scientists to prepare optical/mechanical test methods
- Designed mechanical drawings and prototypes in **Solidworks** for use in patents, testing, and development

IntelliJoint Surgical

Product Development Support Specialist

Sept 2022 - Dec 2022

- Developed IntelliJoint VIEW, a web-based planning tool to determine surgical targets for hip arthroplasties
- Evaluated KPI metrics using agile tools (Jira) to assess product quality and team performance
- Developed and executed validation and verification protocols to ensure thorough, traceable testing

Hivvy Health

Design Support Intern

May 2021 - Aug 2021

- Designed a women's pelvic health device by conducting research, generating concepts, and testing functional systems
- Modeled and iterated through 9 mechanical designs of the lubrication system using **Fusion360**

Projects

Peritoneye

Sept 2024 - May 2025

- Designed a high-fidelity prototype providing early detection of peritonitis by optically monitoring WBC concentrations
- Lead usability by organizing stakeholder feedback sessions and validating setup, cleaning, and UI workflows, achieving a 95 on the System Usability Scale
- Synthesized mock effluent using neutrophils and serum and identified 650 nm as an interference-resistant wavelength for WBC optical measurements
- Developed and executed a SOP for establishing a WBC standard curve through neutrophil dilutions, cell counting, and absorbance measurements to evaluate performance
- Developed optical sensor circuits for a Hamamatsu 12880MA sensor, including component wiring, **Arduino** code debugging, and perfboard-based soldered assemblies
- Optimized the drainage workflow by integrating a direct connection between cyclers and waste containers, accounting for system limitations to streamline nurse operations

3D Ultrasonic Imaging Device

Oct 2023 - Dec 2023

- Designed a 3D imaging system capable of hand gesture detection to play a game of "Rock, Paper, Scissors" against AI
- Optimized a rotation-pulley system using **Solidworks** through FEA modeling and rapid prototyping iterations
- Charakterized hand gestures with 93% accuracy and generated 3D ultrasound plot using **Python** and **Arduino**

Skills

Engineering	Systems Engineering & Requirements, Medical Device Development, Risk Analysis (FMEA), Design Controls
Quality & Regulatory	ISO 13485, IEC 62304, IEC 62366, 21 CFR, FDA 510(k), CAPA, Quality Management Systems
Technical	SolidWorks, MATLAB, Python, SQL, Arduino, 3D Printing
Product	Agile Methodologies, Product Lifecycle Management, User Research, Design Verification & Validation