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, regression, integration, performance, and smoke testing using Selenium and Postman
- Collaborated within Agile squads alongside engineers and PMs, developing deep expertise of Campaign Manager

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, and supported **CAPA** initiatives
- Maintained medical standards (**IEC 62304, 21CFR, ISO 14971**) through design reviews, risk & requirement analyses, and SOP management
- 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 meet **FDA 510(k)** regulatory compliance
- Drafted a provisional patent outlining engineering designs and functional improvements to support 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 the second major release of Intellijoint VIEW, a surgical planning tool for hip arthroplasties
- Evaluated KPI metrics using **Jira** dashboards to assess product quality and team performance
- Developed and executed validation and verification protocols to ensure thorough, traceable testing

Hyivy 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
- Organized stakeholder meetings and validated setup, cleaning, and UI workflows, achieving a **95** on the System Usability Scale
- Synthesized mock effluent using neutrophil-serum solutions and identified 650 nm as an interference-resistant wavelength for WBC detection
- Developed a SOP for establishing a WBC standard curve through neutrophil dilutions, cell counting, and absorbance measurements
- Designed optical sensor circuits for a Hamamatsu 12880MA spectrometer using **Arduino**, perfboards, and 3D-printed housings
- Streamlined nurse workflows by integrating a direct cycler-to-waste container connection, improving drainage system usability

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
- Characterized hand gestures with **93%** accuracy and generated 3D ultrasound plot using **Python** and **Arduino**

Skills

Software	Python, Java, C/C++, SQL, MATLAB/Simulink, HTML/CSS, JavaScript, SQL, Postman, UML, Git
Quality & Regulatory	FMEA, CAPA, ISO 13485, ISO 14971, IEC 62304, IEC 62366, FDA 21CFR Part 820
Technical	SolidWorks, Fusion360, Arduino, FEA, 3D Printing, Soldering, OpenSim, 3D Slicer
Product	Jira, Confluence, Asana, Excel, Figma, ClickUp, V&V, Agile, Scrum, Gantt