

PROFILE Eager professional with 2+ years in industry. Growing knowledge of electro-mechanical systems from core engineering concepts to high-level system design. Career ambitions include developing complex mechanical systems in a fast-paced and challenging environment.

EDUCATION **B.S. in Mechanical Engineering, The University of St. Thomas** **9/2017 - 5/2021**
• Involved with [ASME](#), [SHPE](#), [BDPA](#)
• Trained 20 hours/week with Varsity Swim Team while carrying full course load.

SKILLS **Mechanical Design:** SolidWorks, AutoCAD, ANSYS, PrusaSlicer
Software Development: Python, C/C++, Arduino, Javascript, Git/Github, MATLAB/Simulink, OpenCV

EXPERIENCE **Mechanical Engineer, SUBC INC.** **5/2022 - Present**
• Developing electro-mechanical medical device systems and components and integrating into a diverse portfolio of hematology-related applications
• Ideating and championing new and innovative designs from initial concept to production launch
• Managing design activities within a cross-functional team, collaborating with several external supporting groups to maintain rigorous and dynamic schedules
• Pioneered new methodology for continuous DFM/DFA improvement. Employed analytical methods to pinpoint root causes of field failures and gain a deeper understanding of product issues affecting assembly efficiency.

Mechanical Engineer, MicroMed Solutions **9/2021 - 5/2022**
• Played a key role in R&D initiatives, designing and developing mechanical systems for new biotech products.
• Applied engineering analysis techniques, such as finite element analysis (FEA) and simulation, to evaluate and improve design integrity.
• Provided technical input in design reviews to ensure compliance with project goals and specifications.
• Prepared and presented BOMs, drawing packages, technical reports and documentation to communicate design concepts and manufacturing results to stakeholders.

Research Assistant, The University of Saint Thomas **9/2020 - 5/2021**
• Experimentally acquired and analyzed effervescent jet flow images with PIV in MATLAB.
• Performed statistical analysis on resulting data to draw conclusions on downstream fluid dynamics for industrial applications.

CNC Machine Operator, Rochester Precision Machine **6/2018 - 8/2018**
• Fabricated engineering designs for plastic and metal-alloy parts with CNC mills and lathes.
• Led quality improvement processes to maintain cosmetic integrity in various product lines.

PROJECTS **Consumer Electronics** – Conceptualized, designed, built, and tested a Resisted Sprinting Device to provide unique training stimulus to athletes and track training outcomes via speed telemetry. Implemented with Mechanical Design and 3D printing, Power Systems, Embedded Design, Embedded Programming, and Python.

FEA Analysis – Performed FEA with ANSYS to design a +1 million-cycle-life crimping tool for [Emerson](#), from ideation to [production](#).

Computer Vision – Devised and programmed vision algorithm to track athlete running speed from 2D phone-shot video using MediaPipe Pose Estimation, Applied biokinematics, OpenCV, Convex hull algorithms, Computer Graphics, Python and Javascript.

CNC Pen Plotter – Conceptualized, designed, built, and tested an X,Y Pen Plotter, including from-scratch software using Arduino, Python, OpenCV, and Computational Geometry to convert 2D images to tool paths to create shaded drawings.