NATHAN ESTERKYN

mechanical engineer

Email: nathanisnotonfire@gmail.com
Phone: 1(415)-713-0491
Website: nathanesterkyn.github.io/Portfolio

Education

Colorado School of Mines

Bachelor of Science in Mechanical Engineering
(2019-2023)

Master of Science in Mechanical Engineering
(2022-2024)

Skills

- SolidWorks Modeling/Simulation
- Autodesk Fusion Modeling/CAM
- Siemens NX and CATIA V6
- CNC Machining and programming
- Sheet Metal Fabrication
- Additive Manufacturing
- PCBA Power Electronics Packaging
- Python, Embedded C/C++
- MATLAB/Excel data processing
- Enovia PLM, Design Release
- Injection Molding, Die Casting
- Technical Documentation / BOM
- Mechatronics, Rapid Prototyping
- System Integration and DFMEA
- GD&T and DFM understanding
- 2D drawing creation
- High Volume Production

Patents and Awards

- **Patented Inventor:** Contributed to the design of a novel cryogenic medical device for Ananya Health
- **Dean's List:** All semesters at Colorado School of Mines

Personal Projects and Interests

- BMW Z3 Rebuild: Fully rebuilt and upgraded a totaled BMW Z3 with S54B32 engine swap; completed all custom machining, wiring, and ECU programming

Summary

Mechanical Engineer experienced in R&D, prototyping, and product development across startup and corporate settings. Skilled in designing and optimizing mechanical systems. Hands-on problem-solver and cross-functional collaborator.

Work Experience

Mechanical Integration Engineer
Terumo BCT | Lakewood, CO | 06/2025 – Present

- Designed critical mechanical components for our Rika plasma donation system, working directly with customers to resolve issues
- Collaborated with electrical and software teams to bring new features and sustaining updates to our fleet of devices
- Ideated and designed new core mechanical technologies for Terumo BCT, including new variable peristaltic pump architectures

Engineering Technician
Terumo BCT | Littleton, CO | 06/2024 – 06/2025

- Optimized manufacturing systems for RIKA plasma collection devices by updating automation designs on and off the MFG floor
- Led maintenance teams in daily standup meetings to evaluate critical machine issues and troubleshoot automation components
- Improved output and reduced scrap rates from 20% to less than 5% by implementing precise mechanical and electrical adjustments

Engineering Assistant & R&D Engineer
Ananya Health – San Francisco, CA | 06/2019 – 08/2023

- Co-developed a portable cryoablation device for treating cervical cancer in developing countries and low-resource environments
- Wrote and maintained quality-controlled documentation, including MPIs and IFUs
- Applied SCRUM methodology to accelerate development timelines and system efficiency
- Founding team member instrumental in achieving Y Combinator Class of 2021 acceptance

Engineering Assistant & R&D Engineer
TheraNova LLC – San Francisco, CA | 06/2019 – 08/2023

- Supported development teams for multiple medtech products, including Peri-kinetics and Respirix
- Built and tested prototypes for a Stanford ulnar nerve stimulation study for overactive bladder treatment
- Engineered a high-efficiency cryoablation prototype from a modified A/C unit, reaching -40°C in under one minute