Aram Lee

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Waltham, MA

SUMMARY

A well-rounded technical leader with proven success in driving product development and complex system integration in the medical device and biotech industries. I combine technical expertise with listen-first empathetic leadership to guide high-performing teams and deliver results in high-pressure environments.

SKILLS

- Design Controls (21 CFR), Product lifecycle, design transfer, CDMO management
- CAD & PLM: SolidWorks, Onshape, Fusion360, Windchill, Arena
- Prototyping: CNC milling, 3DP(SLA, DLP, FDM), PCB assembly, wiring assemblies.
- Mechanical Design: GD&T, ISO fits and tolerances, ASME Y14, DFM, DFA
- CFD: COMSOL Multiphysics.
- Software: Python (Backend: controllers, image acquisition & analysis, GUI), JavaScript (frontend), MATLAB.
- Control Systems: PLC programming, Mitsubishi robot programming, HMI
- Software Tools: Git, UNIX Shell.

WORK EXPERIENCE

Solo Founder | lowinertia.com | SEP 2024– PRESENT |
Waltham, MA
- Built a full-stack engineering portfolio builder (Next.js & plasmic for frontend and Supabase for backend services)
- lowinertia.com provides free portfolio hosting service to hundreds of engineers worldwide with a rapidly expanding user base

Senior R&D Engineer | Werfen | JUN 2024– PRESENT |
Bedford, MA
- I intentionally took on a lower-level position to accommodate temporary family responsibilities
- Develop next generation optomechanical components for blood coagulation diagnostic devices.

Engineering Consultant | Wyss Institute at Harvard University | FEB 2024– PRESENT |
Boston, MA
- Developed full stack prototype (mechanical design & software) to demonstrate automated high-speed multiplexed fluorescence imaging (thermal-plx)
- Advise and provide engineering guidance on project basis

Engineering Manager | Torus Biosystems | MAY 2023– JAN 2024 |
Medford, MA
- Oversaw instrument mechanical design, electrical systems, instrument software, and system integration.
- Invented a novel qPCR method (instrument + consumable design) that resulted in 2x speed & 180% thermal uniformity improvement in qPCR technology. Disclosure filed.
- Delivered multiple iterations of functioning prototypes manufactured in-house for performance demonstration
- Provided technical leadership for requirements, design, code and integration of complex systems.
- Managed a team of 6 engineers comprised of mechanical, electrical, and software engineers

Senior Mechanical Engineer | Torus Biosystems | OCT 2021– MAY 2023 |
Medford, MA
- In charge of mechanical design of various critical instrument sub-systems (thermal, optics, and linear actuation) and control/test scripts for thermal and optics systems (python).
- Set up engineering lab from scratch (CNC mill, Carbon 3D printer, Form3, Prusa MKS3, drill press, sheet metal bending, solder/wire scrimping station)
- Defining system level requirements and led hardware and software integrations to meet overall product performance requirements

Global Industrialization Engineer | Philips | JAN 2020– OCT 2021 |
Cambridge, MA
- Returned to Philips to lead technical investigations to address performance and manufacturability issues discovered during high-volume production
- *Results*: Implemented design and manufacturing solutions that resulted in ~ 25% increase in yield. Verisight ICE catheter received 510(k) clearance on 09/02/2020.

R&D Engineer | Boston Scientific | APR 2019– DEC 2019 |
Marlborough, MA

- Led R&D, Design quality, manufacturing, and supplier teams to improve the manufacturability of spyglass catheters

Senior Manufacturing Development Engineer | Philips | AUG 2015– APR 2019 |
Andover, MA

- Core-team member of 3D Intracardiac Echocardiography catheter development project
- Developed custom automation system (6-axis robot & PLC) for micro-assembly of miniature ultrasound components
- Responsible for leading early-stage prototype activities and root cause investigation across 3 multinational development sites.

Engineer II | Terumo Cardiovascular Systems | AUG 2014– JUL 2015 |
Ashland, MA

Engineer I & II | Samsung | AUG 2010– JUL 2013 |
Austin, TX

Engineering Intern | GE Energy | JUN 2009– AUG 2009 |
Schenectady, NY

Education

Boston University Master of Engineering in Biomedical Engineering | MAY 2014 |
Boston, MA

Rensselaer Polytechnic Institute Bachelor of Science in Mechanical Engineering | MAY 2010 |
Troy, NY