

Kari Andresen

EDUCATION

Macaulay Honors College at the City College of New York
Bachelor of Engineering - Mechanical Engineering

GPA: 3.65

SKILLS

Technical drawing/GD&T ▪ 3D modeling ▪ thermal & structural analysis ▪ Microsoft Office Suite ▪ rock climbing (sport, multipitch, anchor building, some trad) ▪ outrigger controls for boom truck ▪ multi-day backcountry hiking (leave no trace, wildlife safety) ▪ basic bike repairs ▪ basic sewing repairs ▪ weightlifting ▪ CDL Class A

EXPERIENCE

Patient Care Coordinator | Optical Shop, MD

January 2026 – Present

- Conduct eye exams to assist remote optometrists and refractionists with assessing patients' eye health by gathering health data using medical instruments and techniques for identifying eye disorders
- Determine patients' vision needs based off of their prescription and daily habits, customize vision correction options to suit their everyday needs and improve their quality of life

Mechanical Engineer Specialist | L3Harris Technologies, MD

March 2021 – December 2024

- Designed low size and weight electronic enclosures for RF applications and produce all drawings necessary for their fabrication and inspection employing GD&T in accordance with ASME Y14.5 2009
- Made board specifications for electrical engineers delineating the size envelope, outline, major mechanical components, and structural features needed for circuit board designs
- Conducted thermal analysis on package concepts in their intended worst case environment and duty cycle to determine sufficient heat management for electronic components
- Determined part compliance with drawings using the Zeiss CMM and MicroVu metrology machine
- Fabricated CCA shields and custom shape gaskets using the Epilog laser system
- Prototyped PCBs using the LPKF Protomat routing system and enclosures using FDM and SLA 3D printers

Manufacturing Engineer Specialist | L3Harris Technologies, FL

April 2019 – March 2021

- Managed a CCA manufacturing lab of 6 technicians for various programs, including for the T7 EOD robot while implementing lean manufacturing practices and conducting 5S and Kaizen events
- Produced assembly instructions in accordance with standard manufacturing processes and worked closely with technicians and specialized engineers to deploy sustainable process improvements and product repairs
- Designed tooling to streamline manufacturing techniques and reduce defects
- Ran reports to track defect data, conduct root cause analyses, and implement strategies to mitigate future defects
- Trained employees to use the manufacturing, material, and quality tracking programs used throughout the company to disposition defective hardware through nonconformance reports and shop orders, create process revisions and deviations, reference engineering drawings and parts lists, and check inventory and the production schedule
- Reviewed and advised mechanical and electrical design concepts for DFMA and lessons learned opportunities
- Composed proposal estimates for prospective contracts based off of financial data of similar programs

Mechanical Design Engineer Senior Associate | Harris Technologies, FL

August 2016 – April 2019

- Designed a cast aluminum chassis for the T4 robot system, a mid-sized EOD robot, using DFMA principles. Optimized features for weight, size, ground clearance, EMI, durability, manufacturability, and part count
- Designed internal and external shielded cables for the T7 robot. Worked with cable vendors to design overmolded strain relief and use their preferred materials and hardware that comply with Harris and industry standards
- Designed a positioner for a phased array that is adjustable in azimuth and elevation. Calculated and tested several actuator configurations for optimal speed of the array boresight
- Conducted extensive market research on various components ranging from rugged laptops, EMI attenuation interface components, rugged mechanical latches, linear actuators

NASA Rotorcraft Aeromechanics Branch Intern, Ames Research Center, CA

June 2015 – August 2015

- Conceptually designed an unmanned aircraft system with the US Army capable of vertical takeoff and landing and an hour-long mission profile. Performed extensive market research on relevant aircraft to determine vehicle configuration. Calculated fuel, power, and weight, using sizing equations