

# KATHERINE RUELAN

ruelankatherine@gmail.com | (856)-834-3792 | <https://www.linkedin.com/in/katherineruelan/>

## CAREER SUMMARY

Extensive background in military and civilian electro-mechanical repair and manufacturing down to the printed circuit board (PCB) level. Seeking a position as an electro-mechanical engineering intern. Motivated to serve as an asset to a mission-driven company.

## EDUCATION

<b>Cornell University</b> , Ithaca, NY Bachelor of Science (B.S.), Mechanical Engineering	Cumulative GPA: 3.46 Completion: May 2027
<b>Rowan College at Burlington County</b> , Mt. Laurel, NJ Associate of Science (A.S.), Engineering	Cumulative GPA: 4.0 Completion: May 2024

## RELEVANT COURSES

Statics and Mechanics of Solids, Thermodynamics, Digital Electronics, Design Computer Graphics (AutoCAD), Fundamentals of Programming (Python), Introduction to Mechanical Design (Fusion), Dynamics

## RELEVANT EXPERIENCE

<b>Northrop Grumman, Aeronautics Sector</b> <i>Electronics Engineering Intern, Avionics Integration-East</i>	Melbourne, FL Jun 2025 – Jul 2025
<ul style="list-style-type: none"><li>Conducted research and completed a trade-analysis study on a subsystem for software-defined radio systems</li><li>Collaborated to establish system and subsystem requirements and test-use cases in an advanced avionics research laboratory</li><li>Developed and modified Model-Based Systems Engineering (MBSE) models in reference to their corresponding Procedures and Operating Practices (PrOP)</li><li>Led a small team in the production of Contract Data / Deliverables / Documentation Requirements List (CDRL) templates for sector-wide use</li></ul>	
<b>Syscom Tech</b> <i>Supervisor</i>	Moorestown, NJ Nov 2021 – Jul 2023
<ul style="list-style-type: none"><li>Managed production of mechanical assembly and through-hole soldering processes including, but not limited to material acquisition for assembly builds to promptly fulfill customer orders</li><li>Drastically decreased man hours spent training by drafting detailed and user-friendly work instructions for various types of electro-mechanical assembly tasks for long-term use over the duration of multiple projects</li><li>Met deadlines by managing my own as well as others' time according to company needs to ship approximately \$300,000-\$800,000 of product per month</li><li>Increased productivity and efficiency of production by redesigning workspace to better accommodate high-capacity workflow</li></ul>	
<b>Production Group Leader</b>	Jul 2020 – Nov 2021
<ul style="list-style-type: none"><li>Performed quality assurance inspection on printed circuit boards and mechanically assembled units including cross-referencing bills of materials to verify accuracy of assembled pieces</li><li>Learned new tasks in-depth within short periods of time to then serve as a training asset within mechanical assembly, through-hole soldering, and surface mount soldering sections</li><li>Interacted with customers to demonstrate the manufacturing process and collaborate on process improvements for assemblies</li></ul>	
<b>United States Marine Corps</b> <i>Electronic Key Management System Section Chief</i>	Okinawa, JP Jul 2019 – Oct 2019
<ul style="list-style-type: none"><li>Conceptualized and created infrastructure for a new system of tracking electronic key management system (EKMS) cryptographic equipment within the maintenance cycle</li><li>Trained a unit of approximately 50-60 Marines to perform their daily tasks within the parameters of the newly defined system</li></ul>	
<b>Radio and Miniature/Micro-Miniature Electronics Repair Technician/Section Head</b>	Jan 2017 – Jul 2019
<ul style="list-style-type: none"><li>Mechanically and electronically repaired damaged and faulty radio systems, circuit boards, and cables</li><li>Managed inventory of repair equipment and components to ensure it was maintained in alignment with usage trends, expediting the repair process by eliminating time spent waiting for replacement parts to be shipped</li></ul>	

## LEADERSHIP EXPERIENCE

<b>Cornell University – Officer, Veterans Association at Cornell University</b>	Aug 2024 – Present
<b>Rowan College at Burlington County – Peer Mentor, Veterans Center</b>	Aug 2023 – May 2024

## AWARDS

<b>SALUTE Veterans National Honor Society</b> , Member (2025)	<b>Lockheed Martin Vocational Scholarship</b> (2023)
<b>Cornell Veterans Engineering Scholarship</b> (2024)	<b>Mu Alpha Theta</b> , Member (2023)
<b>Dean's List</b> , Rowan College at Burlington County (2023-2024)	<b>Phi Theta Kappa</b> , Member (2023)