Jared **Holland**

Sylva, North Carolina 28779

About me

A results-driven engineering professional with a strong foundation in Mechanical Engineering and a keen interest in the advancement of technology, seeking to leverage my years of hands-on industry experience and my educational background to contribute to the field of engineering.

Areas of specialization

3D CAD Software • CFD Simulation • FEA Analysis • Python • MATLAB/Octave • 3D Printing Technology • Mechanical Drawings • CNC Machining

Soft Skills

Teamwork Oriented • Strong Communicator • Leadership • Organized

Interests

Blacksmithing, 3D printing, Robotics, CNC Machining, Hiking, Plants, Guitar

jsholland231@gmail.com

828-342-7788

Employment History

2023–2024

Leidos: Power Distribution

Power Distribution Engineer · Asheville, NC

- Developed power pole layouts in collaboration with Duke Energy, demonstrating expertise in engineering design principles and adherence to industry standards.
- Managed bill of materials to ensure the reliability and efficiency of distribution circuits, contributing to the seamless operation of the North Carolina power distribution system.
- Utilized Maximo to facilitate effective communication and coordination of permitting efforts and vital design information, optimizing construction processes for field personnel and minimizing project delays.
- Performed field survey work to inspect and gather data on each power pole assigned to the Leidos Asheville office so that the engineering team had sufficient data to start their designs.
- Leveraged ArcGIS to generate preliminary designs, proactively identifying and addressing potential environmental, structural, and permitting challenges before initiating formal design processes.

2022–2023

TekTone: Sound & Signal

Mechanical Engineering Intern · Franklin, NC

- Led the design of mechanical components for two anti-vandal nurse call stations, overseeing the entire lifecycle from conceptualization to successful product launch. Utilized Gantt Project for efficient project management, facilitating collaboration with cross-functional teams and ensuring timely achievement of project milestones.
- Spearheaded the development of high-quality 3D printable test fixtures to enhance production processes, collaborating closely with production floor workers and machine shop personnel to ensure design accuracy and manufacturability. Implemented ASME standards and best practices in mechanical drawings, demonstrating a commitment to quality and precision engineering.
- Introduced and implemented 3D printing technology that aided in producing corrective parts, resulting in cost savings and helped streamline production processes that were designed to correct the issues found.
- Conducted research projects that involved root cause analysis among other optimization studies. These projects used software tools such as R Studio, Python, and MATLAB/Octave to produce high-quality graphs and figures that were then organized in LaTeX for presentation to management and interested parties.

2019–2022

TekTone: Sound & Signal

Manufacturing Engineering Intern · Franklin, NC

- Worked with other technicians to run various parts of the automation line to ensure we met the production quota. This fostered a culture among the automated assembly line workers of inclusiveness, excellence, and teamwork. We viewed our fellow workers' success as our own success.
- Developed Python script modules for KiCAD circuit board design software, enabling seamless communication between engineering and production teams. These modules generated usable files for the Panasonic automation line and the SPEA 4080, improving design efficiency and reducing errors in manufacturing.
- Demonstrated initiative and dedication, progressing from an electronics assembly worker to a Manufacturing Engineering Intern within a short period, showcasing adaptability and a strong work ethic.

Education

2019–2023

Bachelors In Mechanical Engineering
Western Carolina University · Cullowhee, NC

CubeSat Capstone Project
fall and spring senior semesters

- Led a multidisciplinary team in the development of a CubeSat Capstone Project, serving as a bridge between mechanical engineering principles and aerospace design practices.
- Conducted extensive preliminary research to inform project progress, contributing to the successful completion of milestones within the allocated time frame.
- Utilized programming skills in VS Code to support electrical engineering team members with logic board programming and conducted design audits of circuit boards using KiCAD circuit board design software.
- Oversaw the design and fabrication of the mechanical frame, ensuring compliance with project requirements and specifications.
- Facilitated communication with sponsors and engineering mentors, providing regular updates and sharing design results to guide project direction and meet sponsor objectives.

Academic Achievements

- Dean's List recognition for outstanding academic performance.
- Graduated with a minor in math.

Technical Skills Acquired

- Proficiency in Finite Element Analysis (FEA) for gantries and steel structures in both CREO parametric and Ansys.
- Advanced proficiency in 3D modeling and assembly using Creo Parametric and Autodesk Inventor.
- Foundational understanding of Computational Fluid Dynamics (CFD) analysis using Ansys software.
- Hands-on experience in waterjet cutting production workflow.
- Assisted in repair and troubleshooting within the 3D print lab.

2015–2019

Associates in Science
Southwestern Community College · Sylva, NC

- Developed proficiency in 3D printer design and modification, culminating in the construction of a customized 3D printer from scratch.
- Applied knowledge in hobby electronics and utilized KiCAD for electronics design projects.
- Acquired practical skills in metalworking and blacksmithing, including basic practices for MIG and Arc welding techniques.
- Gained proficiency in programming languages including C++, C#, Python, Arduino, and G-code, enabling customization of custom 3D printer firmware.
- Developed strong foundations in 3D CAD software such as FreeCAD, Autodesk Inventor, and Blender, utilizing these skills to design and produce 3D printable products that funded workshop upgrades and materials.

Software Experience and Technical Skills

Python	LaTeX	CREO Parametric	KiCAD
FreeCAD	CREO: FEA analysis	ANSYS	ANSYS: Fluent
R Studio	Octave	MATLAB	C++
3D Printing	Maximo	Water Jet Cutting	Product Development
Mechanical Drawings	VS Code	Arduino	Circuit Board Manufacturing

Certificates

June 2023 6 Axis Robotic Arms: ASME
Jan 2023-Feb 2023 Water Jet Cutting: Western Carolina University
June 2024 OnShape: Detailed Drawings

References

Leidos| Hank Seaman (Distribution Mentor):	980-253-5045
Tektone| Kim Hammaker (VP manufacturing):	828-371-4654
WCU| Wes Stone (Director of Engineering + Technology):	wstone@email.wcu.edu, 828-227-2181
WCU| Enrique Gomez (CubeSat Project Sponsor):	egomez@email.wcu.edu, 828-227-2718
WCU| Scott Rowe (Fluid Dynamics Professor):	srowe@email.wcu.edu, 314-601-4836