Jared **Holland**

Franklin, North Carolina 28734

About me

A results-driven professional with a strong foundation in Mechanical Engineering and a keen interest in the problem solving and optimization, seeking to leverage my years of hands-on industry experience and my educational background to contribute to Western Carolina University.

Areas of specialization

Process Optimization • 3D CAD Software • Data Collection • Python • Microsoft Excel • 3D Printing Technology • Mechanical Drawings • CNC Machining • Welding

Soft Skills

Teamwork Oriented • Strong Communicator • Leadership • Organized • Problem Solver

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 grid.
- 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.

2022–2023

TekTone: Sound & Signal
Mechanical Engineering Intern · Franklin, NC

- Led the mechanical design for two anti-vandal nurse call stations, overseeing the entire life cycle from conceptualization to successful product launch. **Gantt Project** was utilized heavily for efficient project management during this assignment. It was indispensable in properly allocating team resources and ensuring the timely achievement of project milestones.
- Spearheaded the usage of 3D printing technology for use in the **fabrication** of high-quality **test fixtures** that enhanced production processes and turnaround times. During the design phase collaboration with the production floor workers and machine shop personnel was instrumental in ensuring that **each test article** or **tool** was built to fit their design needs and to ensure manufacturability.
- Implemented 3D printing technology that aided in producing corrective parts for high-volume products resulting in savings; avoiding shipping issues and lead times in injection mold fabrication.
- Provided **Tech Support** for the test fixtures on the production floor.

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. Our technician lead never had to worry about our competence.
- Used raspberry pi based **Mariadb** database server for optimzation research and TekTone's **MySQL** database to pull inventory and product information.
- Trained to **operate** and **maintain** the **Panasonic pick n place equipment**, **Automated Optical Inspection equipment**, and **SPEA 4080** high-production flying probe tester.
- Developed **Python** script modules for KiCAD circuit board design software using **VS Code**, 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 2 months, 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

- Hand-picked by the WCU rapid center staff for my demonstrated knowledge and competence in heat transfer analysis and structural design.
- Led a multidisciplinary team in developing the mechanical design for the CubeSat frame.
- Utilized programming skills in VS Code to **support electrical engineering team members** with logic board programming and **conducted design audits of circuit boards** assessing **system performance**, **layout**, **operational limits**, **reliability**, and **manufacturability** using KiCAD circuit board design software.

Academic Achievements

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

Technical Skills Acquired

- Conducted an **independent study with Tektone: Sound & Signal** to determine the thermal loads on their nurse call system hardware. This required extensive use of **MATLAB** and **FLIR** devices to determine if the electronics needed extra ventilation or cooling in extreme heat from poorly designed server rooms.
- Assisted in **repair**, **modification**, and **maintenance** of 3D printers within the 3D print lab.
- Utilized CNC Machining for milling **wood** and **plastic** parts.
- Learned Aluminum **TIG welding** for the CubeSat project.

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	SQL	C#	Fabrication
R Studio	Linux OS	MATLAB	C++
(FDM) 3D Printing	Maximo	Water Jet Cutting	Product Development
Mechanical Drawings	VS Code	3 Axis CNC Machining	Circuit Board Manufacturing

Certificates

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

References

Tektone| Kim Hammaker (VP manufacturing):	828-371-4654
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