

# Jared Holland

Franklin, North Carolina 28734

## About me

I am a keen professional with a diverse background in data management and engineering disciplines. I have experience in nurse call system design, test fixture design, power distribution engineering, satellite frame design, SQL database management, and university registration systems.

I have a Bachelors in mechanical engineering, an Associates in Science I completed while I was in high school, and I am currently working towards my master's in Engineering Technology.

My top expertise is in reverse engineering, rapid prototyping, FEA simulation, 3D CAD modeling, and SQL programming.

## Areas of specialization



3D CAD Software • FEA Analysis  
• Rapid Prototyping  
• MATLAB/Octave • 3D Printing Technology • Mechanical Drawings • SQL Programming

## Soft Skills

Teamwork Oriented • Strong Communicator • Leadership • Organized

## Interests

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

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## EMPLOYMENT HISTORY

2024–Present

### Western Carolina University

TECHNICAL SUPPORT TECHNICIAN • Cullowhee, NC 

- Writes and verifies Majors and Degrees created using Degreeworks products from Ellucian.
- Designs, debugs, and maintains SQL reports vital to WCU's day to day operations.
- Performs course substitutions and waiver requests from all the departments at WCU.
- Provides customer service to student and faculty regarding information or assistance in registrar related services.
- Optimizes programs and uses WCU's large amounts of student data to help test new tools designed for the university registrar system.

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.




2019–2023

### 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.
- 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.

EDUCATION

2025–Present	<div><b>Masters in Engineering Technology</b> WESTERN CAROLINA UNIVERSITY · Cullowhee, NC </div> <div><b>Class Experiences</b><ul style="list-style-type: none"><li>ET 593 - Operations Research<ul style="list-style-type: none"><li>Learned key skills in optimizing prodcuton environments</li></ul></li><li>ET 572 - Finite Element Analysis<ul style="list-style-type: none"><li>Demonstrated profecieny using Abaqus: FEA</li><li>Simulated snap joints, structutral components, and learned where to find online resources for non-linear materials.</li></ul></li></ul></div>
2019–2023	<div><b>Bachelors In Mechanical Engineering</b> WESTERN CAROLINA UNIVERSITY · Cullowhee, NC </div> <div><b>CubeSat Capstone Project</b> <i>fall and spring senior semesters</i><ul style="list-style-type: none"><li>Led a multidisciplinary team in the development of a CubeSat Capstone Project, serving as a bridge between mechanical engineering principles and aerospace design practices.</li><li>Conducted extensive preliminary research to inform project progress, contributing to the successful completion of milestones within the al-located time frame.</li><li>Utilized programming skills in VS Code to support electrical engineer- ing team members with logic board programming and conducted de- sign audits of circuit boards using KiCAD circuit board design software.</li><li>Oversaw the design and fabrication of the mechanical frame, ensuring compliance with project requirements and specifications.</li><li>Facilitated communication with sponsors and engineering mentors, providing regular updates and sharing design results to guide project direction and meet sponsor objectives.</li></ul></div> <div><b>Academic Achievements</b><ul style="list-style-type: none"><li>Dean's List recognition for outstanding academic performance.</li><li>Graduated with a minor in math.</li></ul></div> <div><b>Technical Skills Acquired</b><ul style="list-style-type: none"><li>Proficiency in Finite Element Analysis (FEA) for gantries and steel struc- tures in both CREO parametric and Ansys.</li><li>Advanced proficiency in 3D modeling and assembly using Creo Para- metric and Autodesk Inventor.</li><li>Hands-on experience in waterjet cutting production workflow.</li></ul></div>
2015–2019	<div><b>Associates in Science</b> SOUTHWESTERN COMMUNITY COLLEGE · Sylva, NC </div> <div><ul style="list-style-type: none"><li>Developed proficiency in 3D printer design and modification, culminat- ing in the construction of a customized 3D printer from scratch.</li><li>Applied knowledge in hobby electronics and utilized KiCAD for elec- tronics design projects.</li><li>Acquired practical skills in metalworking and blacksmithing, including basic practices for MIG and Arc welding techniques.</li><li>Gained proficiency in programming languages including C++, C#, Python, Arduino, and G-code, enabling customization of custom 3D printer firmware.</li><li>Developed strong foundations in 3D CAD software such as FreeCAD, Autodesk Inventor, and Blender, utilizing these skills to design and pro- duce 3D printable products that funded workshop upgrades and ma- terials.</li></ul></div>

SOFTWARE EXPERIENCE AND TECHNICAL SKILLS

SQL	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	TOAD Oracle	Arduino	Circuit Board Manufacturing

## CERTIFICATES

<b>Sep 2024</b>	Intermediate SQL for Data Scientists
<b>June 2024</b>	OnShape: Detailed Drawings
<b>June 2023</b>	6 Axis Robotic Arms: ASME
<b>Jan 2023-Feb 2023</b>	Water Jet Cutting: Western Carolina University

## REFERENCES

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