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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📞 828-342-7788

EMPLOYMENT HISTORY

2024–Present

Western Carolina University
TECHNICAL SUPPORT TECHNICIAN · Cullowhee, NC 📍

- Writes and verifies Majors and Degrees created using Degree-works products from Ellucian.
- Designs, debugs, and maintains SQL reports vital to WCU's daily operations.
- Preforms course substitutions and waiver requests from all the departments at WCU.
- Provides customer service to students and faculty regarding information or assistance in registrar-related services.
- Optimizes programs and uses WCU's large amount 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 life-cycle 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 organized in LaTeX for presentation to management and interested parties.
- 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 | **Masters in Engineering Technology** |
| | WESTERN CAROLINA UNIVERSITY · Cullowhee, NC 📍 |

Notable Class Experience

- ET 593 - Operations Research

  - Learned various techniques in managing efficient assembly lines using data analysis techniques.
  - Practiced experience from team based projects we were taught how to manage and led a team to ensure project deadlines were met.
  - Cemented the importance of gathering useful data, testing, and iterating on simulation models to help aid in making strategic decisions.

| 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.
- 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.
- Hands-on experience in waterjet cutting production workflow.

| 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.
- 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.

CERTIFICATES

April 2025 |	Leadership Mindsets
Sep 2024 |	Intermediate SQL for Data Scientists
Sep 2024 |	MS Teams: Planner Essential Training
June 2023 |	6 Axis Robotic Arms: ASME

REFERENCES

WCU| Jacob Edwards (Applications Analyst):	jedwards@email.wcu.edu
WCU| Wes Stone (Director of Engineering + Technology):	wstone@email.wcu.edu, 828-227-2181
WCU| Basel Alsayyed Ahmad (Assistant Professor):	alsayyed@email.wcu.edu, 828-227-2745