Michaela De Angelis Werner

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EDUCATION

Bachelor of Science in Engineering (Electrical Systems) Graduated: May 2025
Arizona State University - Polytechnic, Mesa, Arizona
GPA: 3.96 (Summa Cum Laude)

ACADEMIC PROJECTS

EGR 401/402: Professional Design Project I/II Fall 2024 - Spring 2025
An industrial-grade pneumatic actuation system to transfer hazardous materials within an enclosed environment.

- Designed and installed a control panel that received inputs from a UR5e cobot and sensors, controlling four solenoid valves based on program logic, with an external power supply that ensured sufficient current capacity
- Fabricated and installed a cable panel featuring RJ-45, D-Sub, and socket connectors to enable quick plug-and-play connection between the actuation system and main system, enhancing ease of use and mobility
- Devised and installed various auxiliary elements of the project, including the carrier for the material canister, the placement of the door cylinders, and the layout of the wiring and tubing for the electrical and pneumatic system

EGR 314: Embedded Systems Design Project II Spring 2024
A battery-powered portable device that autonomously moves a plant in and out of shaded housing according to temperature and humidity data.

- Drafted, tested, and soldered the main PCB for the project, which included multiple sensors with different forms of serial communication that communicated with a main microcontroller
- Deployed C and Python code that allowed for MQTT-to-microcontroller communication that would publish sensor and location data over Wi-Fi for wireless readability, with the ability to change the system from autonomous to manual through Wi-Fi publishing to the microcontroller
- Composed and maintained a website dedicated to the project, fully showcasing the development and manufacturing of the project through a mixture of Markdown and HTML by utilizing GitHub Pages

EXPERIENCE

Electronics Lab Assistant at ASU Polytechnic Sept 2024 - May 2025

- Manufactured 20+ double-sided copper board PCBs using an LPKF S63 board plotter, which included board layout, continuity testing, and equipment maintenance
- Digitally tested for adherence to the minimum requirements for lab manufacturing of 80 submitted PCB files by manually checking the traces, spacings, and drills for each file submitted through a Gerber viewer
- Established a lab manual with standard operating procedures for 6 of the machines at the lab to make the onboarding process for future student workers easier, as well as an advice section dedicated to helping future students
- Composed and maintained a Markdown-based website to provide students with accessible information on submission guidelines, PCB design resources, and common rejection reasons, ensuring ease of updates by future student workers

Website Manager for Convention Organization Jan 2023 - Present

- Composed and maintained a mobile-friendly one-page website using Carrd for a community group's activities for convention planning, including the schedule, location, and results of panel and off-panel activities
- Processed and optimized digital files for print production and web publishing, ensuring adherence to vendor formatting and output standards
- Produced and sold digital artwork using Clip Studio Paint to generate funding for community initiatives and group operations

SKILLS/CERTIFICATIONS

Certifications: CSWA (SolidWorks) | UR5e Training
Hardware: Pneumatic Systems | Electrical Systems | TIG/MIG/Stick Welding | Soldering (Electronics/Pipes) | PCB Design (KiCad, Cadence/Allegro) | PCB Manufacturing (LPKF S63, CircuitPro PM)
Software: Programming (C++, C, Python, LUA, Ladder Logic) | MATLAB | Simulink | Office (Excel, Word, PowerPoint)
Design: 3D (Blender, Substance Painter) | Graphics (Photoshop, Inkscape, Clip Studio Paint) | Web (HTML/CSS, Markdown)