Matthew Goodman

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EDUCATION

University of Central Oklahoma - Edmond, OK **May 2027**

Bachelor of Science: Electrical Engineering & Engineering Physics (ABET) | **Minor:** Mathematics

GPA: 3.43 | **CREDITS:** 85 | **AWARDS:** Dean's Honor Roll, Freshman Honors Scholarship | **CLUBS:** Officer in UCO Physics Society, Member in UCO Student Engagement

TECHNICAL SKILLS

- **Engineering Tools:** OnShape, ANSYS, SolidWorks
- **Programming & Automation:** Python, C, MATLAB, UIPath, N8N, k3s
- **Data & Visualization:** Power BI, pandas, Streamlit, VSCode, Jupyter Notebook, Microsoft Office Suite
- **Hardware & Systems:** Arduino, Circuit Design, Electrical Troubleshooting, 3D Printing
- **Certifications:** Interplay Learning Academy – Electrical, Forklift, Order Picker, Narrow Aisle Reach Truck

PROJECTS

OCR & Receipt/Invoice Automation - Independent Project

- Automated data extraction and processing using UIPath and OCR, reducing manual data entry time and increasing financial record accuracy.
- Integrated workflows with Excel to validate, format, and organize extracted data.

Home Server Project - Independent Project

- Built and configured a home server using ODROID M1 boards for storage, automation, and network services.
- Deployed Ubuntu Server, Docker containers, and remote access utilities, Implementing K3s (lightweight Kubernetes) to orchestrate containerized app across multiple boards.
- Designed and 3D printed a custom server rack with custom interface plates to improve port access, airflow, and durability.

Signals & Systems – Academic Project

- Created MATLAB scripts for signal manipulation, cross-correlation, and RLC circuit analysis, verified simulations with oscilloscope data.
- Designed low-pass and notch filters, applied Fourier series and DFT for analysis and modulation.
- Modeled vehicle suspension using Laplace transforms to analyze system responses, resonant frequencies, and damping.

Build-Your-Own-Car - Academic Project

- Won first place by designing and 3D-printing a Tesla Cybertruck-inspired shell, custom motor mounting plate, and secure housing for components including ESP32, Arduino, and motor controller.
- Integrated mechanical and electrical systems to ensure functionality, durability, and precise component placement.

Stock Dashboard - Independent Project

- Built an interactive 30-day stock price dashboard using Streamlit and pandas for price trend visualization.
- Simulated market behavior with Python and NumPy, enabled dynamic stock ticker selection.

EXPERIENCE

UCO School of Engineering | Researcher **Aug 2024 - Current**

- Conducting research on cerium telluride crystals combined with transition metals for magnetic property enhancement under RCSA grant (August 2025-July 2026).
- Designed Halbach arrays in SolidWorks to test/optimize magnetic field distributions.
- Supported experiments, lab setup, equipment arrangement, safety procedures.

Lowes | Electrical Customer Service Associate **Aug 2023 - Aug 2025**

- Advised customers on electrical concepts, including circuit breakers, wire gauge selection, and voltage requirements.
- Provided technical guidance on electrical tools, lighting solutions, and wiring components.
- Trained/mentored 15+ associates, improving technical knowledge and customer service.
- Earned four service stars for exceptional customer engagement and problem-solving.