DANIEL POWERS

CONTACT

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PROFESSIONAL SUMMARY

Innovative undergraduate researcher at Smart Sensing and Robotics Lab, adept in optimizing LED driver systems and diagnosing electrical failures. Skilled in Python and effective communication, I excel in delivering impactful results and mentoring peers, ensuring high performance in collaborative environments. Passionate about independent learning and advancing technology in impactful applications.

SKILLS

- Python
- C++
- HTML/CSS
- React.js
- Node.js
- Siemens PLC
- GitHub
- Independent learning
- Verbal and written communication
- Researching skills

Portfolio Website & Other Resources

EXPERIENCE

Undergraduate Researcher Smart Sensing and Robotics Lab - Murfreesboro, TN
11/2024 - Present

- Optimized LED driver system for agricultural mold/growth control; reduced LED temperatures by 50% using custom active cooling.
- Diagnosed electrical failures (e.g., blown drivers, fuse sizing, surge current) and performed system-level debugging and iteration.
- Gained experience in power electronics, thermal systems, and embedded control despite no formal coursework in these areas.
- Recorded and analyzed data to produce reports of results.

Vice President & Rank Leader, Band of Blue Marching Band MTSU - Murfreesboro, TN
08/2023 - 12/2024

- Organized rehearsals, mentored section leaders, and contributed to band logistics and morale during high-pressure seasons.

Tech Crew Band of Blue - Murfreesboro, TN
08/2023 - 12/2024

- Managed technical sound recording and playback, sound checks, and equipment maintenance for all rehearsals and performances

EDUCATION

Bachelor of Science: Computer Science Candidate
Middle Tennessee State University (MTSU), Expected graduation 08/2025

PROJECTS

Mooflixz Full Stack Web App, Designed a music exploration and playlisting platform using React, Node.js, and MySQL. Built API integration with Spotify and YouTube for music metadata and playback. Handled user authentication, SQL schema design, and responsive frontend layout.

Autonomous Line-Following Robot, Programmed sensor-based navigation logic in Arduino using PID control to follow a black line course. Designed fault-handling routines for calibration error and edge conditions. Built using Makeblock Ultimate Kit hardware.

PLC Model Conveyor System, Modeled an industrial parts-filtering conveyor system using Siemens S7-1500 PLC and TIA Portal. Programmed logic for part classification using color and metal detecting sensors. Implemented safety mechanisms and redundancies.

MTSU Study App, React.js + Node.js app to standardize Computer Science study resources. Integrated Microsoft Azure authentication and contributed to frontend UI design.

MTSU Parking App, Built a JavaFX-based application to assist students in locating permitted campus parking lots based on their parking pass and class location.

AWARDS

1St Place, HackMT Hackathon – Spring 2024

Computer Science Department Scholarship Recipient - Spring 2025

True Blue Academic Scholarship Recipient – 8/8 Semesters

Dean's List – 8/8 Semesters