Daniel Powers

Manchester, TN 37355
dpower13@vols.utk.edu
keionnepowers@hotmail.com
(970) 590-9094

Skills

- Python
- C++
- Java
- JavaScript
- HTML/CSS
- React.js
- Node.js
- Microsoft Azure
- Arduino
- Siemens PLC
- GitHub

Education

Bachelor of Science in Computer Science

Middle Tennessee State University (MTSU), Murfreesboro, TN | Expected in August 2025

- GPA: 3.98
- Dean's List (Fall 2021–Present)
- Band of Blue Marching Band (Fall 2021 - Fall 2024)
- True Blue Scholarship Recipient
- Computer Science Department Scholarship Recipient
- Member, Association for Computing Machinery (ACM)

Portfolio Website & Other Resources

Motivated Computer Science student with a minor in Engineering Technology pursuing a Master's in Computer Engineering at University of Tennessee Knoxville. Interested in embedded systems, intelligent hardware, and the impact of seamless software-hardware integration.

Work History

Undergraduate Researcher

Smart Sensing and Robotics Lab | November 2024 - Current

- 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.

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.

Leadership Experience

Vice President & Rank Leader, Band of Blue Marching Band

MTSU, Fall 2023 – Fall 2024

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