MATTHEW S. MANGUM

Findlay, OH | 419.721.4557 | [64rcmsm@gmail.com](mailto:64rcmsm@gmail.com)

* Bachelor of Science in Computer Information Systems (emphasis in Software Development) from Post University.
* Nearly 3 years of experience as an AV Control System Programmer/IT Manager for Schoolhouse Electronics LLC.
* Programming: Embedded systems C/C++, Web development AWS, CSS, HTML, JS, TS.
* Possess problem solving, analytical reasoning, critical thinking and project management skills.
* Seeking Software Engineering/Development role with reputable company that will provide real-time experience to be able to learn and grow in a software Engineering/Development career in the Software industry. I want to make cool things.

**EDUCATION**

POST UNIVERSITY | Waterbury, CT Graduated: 2024

* ***Bachelor of Science in Computer Information Systems | Concentration: CIS-Software Development***
* Member of Post University honor society and National Society of Leadership and Success (NSLS).

**WORK HISTORY**

MANGUM & SON’s BUILDING REMODELING **| Findlay**, OH *Part-Time* 2013 - 2022

***Home Remodeling (Early years)***

* Part-time job working for my dad’s small construction business, performing restoration and construction services on home & commercial properties. Restored and/or rebuilt houses damaged by fire or water. Started in middle school and continued into college.

SCHOOLHOUSE ELECTRONICS | Bluffton OH 2022 - 2025

***AV Control System Programmer, IT Support Technician, Network Manager/Installer, General Installer***

* Website Development: Revamped pre-existing company WordPress website. Notable contributions:
  + Interactive map overlay on top of a photo in JavaScript that allows customers to click on a county and dynamically determine their regional salesmen. Implemented Google ReCAPTCHA with backend token validation in PHP. See [here](https://schoolhouseelectronics.com/find-your-salesman/).
  + Built an interactive Popular Products page that dynamically loads data stored in the WordPress photo library, and loads text data from a JSON file using JavaScript. See [here](https://schoolhouseelectronics.com/popular-products/).
  + Developed a Python script to build contact info of potential customers using the Python library Scrapy.
* Designed, Programmed, and Installed Extron Audio Visual Control Systems such as Extron systems for venues like a theater or classroom, enabling AV device control via a touch panel or web app.
* Standard IT work: networking, general IT support, Troubleshooting windows, custom local VPN, Remote management, local server management, and office maintenance.
* Installed Interactive Flat Panels, TVs, Whiteboards, Projectors, as well as HDMI, USB, and CAT6 cables. Terminated Category and Audio cables into various connectors.
* Customer relations, troubleshooting, and managing a team.

***Programming Hobby*** 2023 - Forever

* **Public Projects:**
  + [iBuyBrokenTech](https://ibuybrokentech.com/): A website built from scratch in flat HTML for the frontend, and AWS (API-Gateway, CloudFront, DynamoDB, Lambda, Route-53, S3, and SES) as the backend. Uses a custom solution to invoke “reverse e-commerce” where the consumer sells their broken device to the store i.e. iBuyBrokenTech.
* **Private Projects:**
  + Software for Active Fin Controlled Model Rocket: ESP32 controlling Servos, Gyro, GPS, Altimeter, and small Screen. Software made with Platform-IO using the Arduino Framework, as well as custom PID Control loop drivers.
  + Google Calendar Alternative that runs entirely from a local server. Written in flat HTML, and Typescript. Uses Node.js as the file server/gateway, and a C++ script to process tasks and data flow. The script sorts data using a linked list.
  + Software for Music-Synced LED Light Controller. A Raspberry Pi 5 controlling several Raspberry pi Pico’s which control several LED strips written in C, C++, and PIO Assembly language to control WS2812B LEDs. The Raspberry Pi 5 hosts a local network and runs a node.js server that allows the user to connect and control the lights via a webapp.
  + Participate annually in Advent of Code, a coding competition I participate in for fun. I compete against my programmer friends to see who can solve programs the fastest and also to learn more about language specific features and other programming concepts.

***Electronics Repair Hobby*** 2019 - 2023

* Repaired broken circuitry and other board-level microelectronics repair such as

game consoles, computers, laptops and TVs. Bought broken electronics locally and online, repaired them, then resold them on Facebook Marketplace and eBay.

* Skilled in microsoldering, reheating, reballing, and other techniques.

**CERTIFICATIONS**

* Extron: *Extron AV Associate, Extron Control Specialist, Extron Control Professional, GUI Design Principles, ProDSP Principles*.

**PERSONAL INTERESTS**

* **Programming:** I spend most of my free time working on software projects. I’m fascinated by the internal workings of computers at the lowest level and have been working on learning Assembly Language. I’m also interested in video game and physics engines and I am exploring a project to make a physics engine that will receive fin correction data from my rocket controller ESP32 and will provide real-time feedback to the ESP32 for fine-tuning the PID loop.
* **Music/Instrument**: Play piano. Placed 2nd at state championship then 5th Nationally in Classical Piano competition organized by the American Association of Christian Schools. I play piano for fun on occasion.