MATTHEW GRAHAM

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SYSTEM ADMINISTRATOR

System Administrator with strong skills in managing and optimizing IT infrastructure as well as extensive experience in software development. Efficiently handles system upgrades, troubleshooting, and server maintenance to ensure the business can run smoothly. Focuses on delivering reliable IT solutions with a straightforward approach.

PROFESSIONAL EXPERIENCE

Action Safety Supply Co.
System Administrator **September 2019 - Present**

- **Key Responsibilities**
  - Manage and maintain IT infrastructure: servers, networks (NGFWs, routers, switches, APs), printers, workstations, and mobile devices
  - Provide technical support and troubleshooting for 100+ employees across multiple locations
  - Administer Exchange server and Office 365 environment
  - Oversee company websites, including WordPress and custom training portal
  - Manage video surveillance systems for multiple facilities and for a 200 vehicle fleet
  - Implement and maintain IT security measures and best practices
  - Assist with software deployment and updates across the organization
  - Implement, monitor, test backups and disaster recovery for our services
  - Build documentation on existing and future infrastructure as well as maintain inventory of all IT systems
  - Configure and support specialized industry software for fleet management and safety resources

- **Key Accomplishments**
  - Improved IT security and monitoring through the implementation of access controls, implementing 2FA where possible and implementing Zabbix for centralized monitoring of on-prem and remote services.
  - Rolled out 2-factor authentication for all Office 365 resources significantly reducing our exposure to bad actors and provided support onboarding employees with 2FA apps on their company devices.
  - Migrated from on-premises Exchange server to Office 365, improving email security, reliability, and ease of use for employees.
  - Designed and implemented a custom training portal streamlining employee onboarding and a major role in improving the safety of our employees through easy access to training videos and resources.
  - Made significant upgrades to our video surveillance systems, installing and replacing cameras throughout our sites; enhancing coverage and footage retention capabilities, as well as working with management on any incidents that required detailed analysis.
  - Led the implementation and migration to new fleet management software, optimizing operations for a 200 vehicle fleet, migrated fleet from AT&T to Verizon for all modems, automated daily reports to maintenance and management for any alerts generated by our onboard video systems.
  - Implemented Ansible for deploying updates and security patches for our linux services as well as automating backups and the restore process.

BirdDog Software **2013 - September 2019**
Software Developer

- **Software Development**
  - Contributed to a team dedicated to simplifying and automating procedures of an older desktop based app into a full web-based enterprise platform.
  - Played a key role in updating the company's software to support responsive design through the use of Zurb Foundation, enhancing user experience on various devices.
  - Utilized KnockoutJS to drastically improve responsiveness for clients and their ecommerce customers, leading to smoother and more dynamic user interactions increasing revenue and retention for our clients.
  - Focused on modernizing the company's customer service and enterprise software by integrating ASP.NET MVC with modern technology, creating dynamic and responsive CRUD pages replacing the legacy framework which relied upon ASP.NET WebForms.
  - Developed and maintained web-based applications using C#, and SQL Server, contributing to the full software development lifecycle from requirements gathering to deployment and maintenance.
  - Collaborated with UI/UX designers to create user-friendly interfaces, enhancing the overall user experience.

- **Build Management**
  - Assisted in managing the build and release process, ensuring timely and error-free deployments.
  - Worked closely with the QA team to automate testing, improve the reliability of the software, and ensure released builds were validated by automated testing as well as via manual QA testing.

- **Key Accomplishments**
  - Improved application performance by optimizing SQL queries and refactoring legacy code.
  - Built and led the successful launch of a new product feature adding support for recurring subscriptions allowing our clients to implement monthly recurring revenue into their revenue stream.
  - Implemented a new build notification system, reducing the time developers spent on manual build monitoring and improved our abilities to rely on our CI/CD infrastructure and quickly deploy updates while maintaining a fast iteration cycle between project requirements, developers, and QA.

PERSONAL PROJECTS

- **Smart Switch Power Sequencer**
  - Built a web app in Python that supports defining a turn on/off order sequence via config for Kasa Smart Switches allowing the user to manage power via a web interface for a professional audio system.
  - Allows you define delays between changing the power state of devices in the chain allowing speakers to wait to power on until the mixing console is fully powered on.

- **3D Printed Camera Motion Rig**
  - Using components from a 3d printer; designed and built a pan/tilt/zoom motion rig that can accommodate a number of different camera sizes and systems for use in a live streaming environment.
  - Two Arduino boards are utilized for motor control and sensors while joystick input and web services are handled via a Raspberry Pi communicating with the Arduino boards over serial.
  - A web service is hosted allowing a Streamdeck to send requests commanding the motion rig to move to a saved preset position as well as support for connecting a MIDI device to recall presets.
  - Features custom 3d printed electronics boxes with motors connected via ethernet cables and a custom cable for the 12v power supply allowing for the rig to be quickly packed up and deployed.

- **MIDI Lighting Control Service**
  - Built a Python service that monitors MIDI input messages from DMX lighting control software and manages MIDI output based on the known state from the DMX software.
  - The existing software had no supported method of setting a light state to on or off, it can only toggle state, this service keeps track of the desired state of a light allowing to add additional functionality such as a macro that only turns off a selection of lights instead of only being able to toggle state.

EDUCATION

High School, Homeschooling

Graduated through homeschooling, where I tailored my education to focus on software development and engineering. My learning experience was heavily influenced by my active participation in the FIRST Robotics program, where I developed practical skills in programming and teamwork. Immediately after graduating, I transitioned into a professional career as a software developer, leveraging the hands-on experience gained from robotics competitions.

FIRST Robotics, Programmer & Mentor

- **Student Participant & Programmer**
  - Actively participated in both the FIRST Tech Challenge (FTC) and FIRST Robotics Competition (FRC) for four years, developing a deep expertise in robotics programming.
  - Played a key role in the team's success, contributing to advanced coding solutions that powered our robots through complex challenges.
  - Demonstrated consistent excellence, leading our team to the world championships for three consecutive years, showcasing innovative designs and programming skills.

- **Programming Mentor**
  - Transitioned into a mentorship role, driven by a passion for technology and a commitment to helping the next generation of engineers.
  - Worked closely with students, helping them with programming languages and techniques, and fostering a foundation in robotics.
  - Provided hands-on guidance, helping students navigate the complexities of FIRST's competitions and empowering them to achieve their potential.
  - Supported teams in troubleshooting, refining strategies, and optimizing code, contributing to their ongoing success in regional and national competitions.