

Cole Mullenbach

Software Engineer & Automation Engineer

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Professional Summary

Software Engineer specializing in automation solutions and data processing with expertise in Python, SQL, MATLAB, and Linux server administration. Experienced in bridging technical complexity with user-friendly interfaces and delivering reliable systems for cross-functional teams.

Professional Experience

Excel Engineering — Software Engineer

2024 – Present

- Develop tools for CAN bus analysis and automation pipelines
- Create customized solutions for diesel emissions testing
- Bridge technical complexity with user-friendly interfaces
- Collaborate with cross-functional teams to deliver reliable systems
- Implement data processing workflows and device communication protocols

Army National Guard — Infantry Mortar Squad Leader

2018 – 2024

- Led a team of 4 in field operations and precision deployment
- Developed leadership skills in high-pressure environments
- Managed mission-critical operations with attention to detail
- Demonstrated clear communication and team dynamics expertise
- Maintained equipment and coordinated tactical operations

Technical Skills

Programming Languages

Python, SQL, MATLAB, Java, Bash, HTML5/CSS3/JavaScript

Systems & Infrastructure

Linux server administration, Docker, automation pipelines

Data & Automation

PostgreSQL, CAN-BUS analysis, Data Analysis, n8n automation

Specializations

Diesel emissions testing, automation pipelines, device communications

Notable Projects

Diesel Emissions Testing Automation

Developed comprehensive automation solutions including data scripting, device communications, automated backups, and device control systems

Custom Automation Workflows

Built event-driven workflows using n8n and Python orchestrating Postgres-backed tasks for data processing

Linux Server Administration

Managed Linux server environments with focus on automation, monitoring, and system optimization

Education

Iowa State University

Bachelor's Degree in Software Engineering