

JOE HEFLIN

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As a versatile Software Engineer, I have demonstrated the ability to quickly adapt to new concepts and technologies. My passion lies in solving problems that elevate team and company productivity, promoting swiftness, efficiency, and overall effectiveness.

PROFESSIONAL EXPERIENCE

Software Developer, Infotainment

5/23 - Present

General Motors, Software Defined Vehicle: Infotainment

Detroit, MI

- Built an Android application in Java using the Android Automotive framework to allow developers and QA engineers to set vehicle signals and view their metadata quickly and easily.
- Improved routine component test time by 95% and allowed engineers to more easily troubleshoot system issues.
- Developed unit test suite to ensure project maintainability and aid application debugging.
- Team utilized the Scaled Agile Framework using GitHub Git-based version control with JIRA issue tracking.

Software Architecture Engineer

8/22 – 5/23

General Motors, Vehicle Intelligence Platform Execution Mechatronics

Detroit, MI

- Completed various projects transitioning the company's vehicle electrical architecture enabling Software Defined Vehicle rollout. Required acting upon and solving highly ambiguous problems.
- Developed a cost-effective solution enabling modules to self-identify within the vehicle network. Employed data collection and comparison techniques across 7 designs to achieve optimal functionality.
- Championed the development of an IO endpoint detection tool, aimed at slashing calibration generation time from hours to mere minutes. This innovation streamlined workflow efficiency and significantly accelerated vehicle integration processes.
- Strategized how to decouple mechatronic C++ applications to enable more modular software updates.

Software Integration Engineer

1/22 – 8/22

General Motors, Vehicle Data Hub Software Integration Team

Detroit, MI

- Developed a Python-based tool to simulate data loss and visually demonstrate system constraints. The data generated influenced strategic decisions, advocating successfully for increased bandwidth allocation for the Vehicle Data Hub feature in discussions with executive leadership.
- Collaborated closely with the development team to troubleshoot software changes using a test bench.

Software Engineer Intern

5/20 - 8/20

Trantor Inc.

Remote

- Managed automated data acquisition side of NLP ML application to identify technical and soft skills required given a specific career dynamically sourced from a diverse set of web pages.
- Wrote scripts to scrape text from various websites using Python's selenium framework.
- Analyzed ambiguous data to discern which scraping algorithm / data source scheme was most effective.

PROJECT EXPERIENCE

Senior Design Course: Designing Software for Maintainability

1/21 - 5/21

- Designed and programmed dynamic for web application to track electrical instruments using ReactJS.
- Built Test suite in python for Django Rest API backend.
- Implemented reusable frontend features such as tables, drag and drop menus, and a pdf generator.

EDUCATION

Duke University, Pratt School of Engineering

8/17 - 5/21

B.S. Electrical & Computer Engineering, B.S. Computer Science

Durham, NC

- Relevant coursework: Data Structures & Algorithms, Advanced Computer Hardware, Software Design & Implementation, Operating Systems, Eng. Software for Maintainability, Database Systems, Computer Networks

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Coursera Courses

- Cloud Computing Foundations; Cloud Virtualization Containers and API

3/23 – 8/23

SKILLS AND CERTIFICATIONS

CERTIFICATIONS: AWS Certified Cloud Practitioner, SAFe Agile Software Engineering

PROGRAMMING LANGUAGES: Python, Java