

Shafee Mustafa

SOFTWARE ENGINEER

Warren, MI

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Education

Michigan State University

BACHELOR OF SCIENCE IN COMPUTER SCIENCE AND MATHEMATICS, GPA: 3.9/4.0

May 2021

Skills

Languages	Python, Java, C++, C#, C, HTML, Javascript, ARM Assembly, MATLAB, SQL, Haskell, PHP, Tcl
Libraries	OpenCV, Keras, NumPy, SciPy, PyQt, Python Imaging Library, Microsoft Foundation Class, Flask
Applications	MATLAB, Simulink, Unity, Unreal, MagicDraw, Carla, CarMaker
Other	Linux, Git

Experience

Ford Motor Company

Dearborn, MI

ADAS SIMULATION ENGINEER

April 2022 - Present

- Testing Advanced Driving Assistance System (ADAS) features in a closed-loop simulation environment to identify and report bugs
- Automating creation of driving scenarios based on real-world drives to enable regression testing
- Architecting and developing pipeline for the calculation of key performance indicators to evaluate overall feature performance over large-scale simulation
- Recreated driving scenarios in simulation based on real-world data logs to enable more robust testing
- Integrated various control systems models in Simulink for Software-in-the-Loop testing

Waymo via Akorbi

Novi, MI

SOFTWARE QUALITY ASSURANCE

June 2021 - April 2022

- Analyzed data logs (lidar, radar, camera, steering, braking, etc.) from the Waymo autonomous vehicle.
- Validated the latest software releases to ensure they can be pushed to the full Waymo fleet.
- Performed detailed root cause analysis of behavioral issues noted by drivers.
- Filed bugs for new failure modes or notable trends.
- Produced reports analyzing performance of new software versions in real-world testing.
- Communicated regressions and new issues with software engineers.
- Mentored new employees in how the various modules of the Waymo car work, how to use internal tools, and how to perform detailed root cause analysis.

Projects

CSE 498: Malware Reverse Engineering Platform

- Designed and coded a platform that integrates Cuckoo, an automated malware analysis system, and MISP, a threat intelligence sharing tool, that can pull files of interest from a variety of sources
- The files of interest can be manually inputted by the user, automatically scraped from a given website, or obtained from VirusTotal's repository
- Files of interest are automatically sent to Cuckoo for analysis, and the output log is automatically sent to MISP for use by the organization
- Project was requested by and designed to the specifications of GM's cyber intelligence team
- Written using Python, HTML, JavaScript, PostgreSQL, Flask.