Malek Abdelrahman Hassan

Simulation Test Engineer

in/malek-abdelrahman | github.com/Malek | Professional Portfolio

malek345abdelrhman@gmail.com | 01006399425

SUMMARY

ISTQB-certified Simulation Test Engineer focused on autonomous-driving validation for General Motors, with expertise in scenario-based testing, Python automation and AI-assisted testing workflows. Serving as Testing POC, driving delivery coordination, technical evaluation and team development.

Experience

Simulation Test Engineer – Autonomous Vehicles Oct 2024 – Present | Remote USA

Micro Engineering Tech Inc. | Client: General Motors (GM)

- Serve as **Testing Point of Contact (POC)**, coordinating priorities, managing backlog execution and overseeing day-to-day test delivery across a team of testers.
- **Evaluate tester performance** and provide hands-on technical coaching, troubleshooting and knowledge sharing to improve team capabilities and execution quality.
- **Leverage AI-assisted workflows** to improve testing efficiency and enhance simulation-testing practices.
- Design and execute **system, functional and regression tests** for autonomous-driving features, translating requirements and real-world use cases into structured test plans and acceptance criteria.
- Develop **reproducible simulation scenarios** using real-world driving data, ODD definitions and coverage matrices; automate scenario generation using Python-based frameworks and CLI tools.
- Execute test suites across multiple simulation environments, lead **defect triage and tracking**, and report results to stakeholders to support release-readiness decisions.
- Deliver and maintain **1,000+ scenario-driven test cases**, supporting feature validation, regression prevention and reliable software releases.

Education

Bachelor of Computer and Systems Engineering 2019 – 2024 | Cairo, Egypt

Ain Shams University - C.GPA: 3.0

Publications

MCS-FT: A Fault-Tolerant AUTOSAR OS For Multicore Platforms

6th Novel Intelligent and Leading Emerging Sciences Conference (NILES). IEEE, 2024.

Certificates

ISTQB Certified Tester – Foundation Level (CTFL) | Siemens GP | Siemens Academy

Skills

Testing: System, functional and regression testing; scenario-based test design; simulation-based validation; ODD-based coverage; requirements analysis; acceptance criteria; defect triage.

Automation & tools: Python scripting, AI-assisted testing, scenario-generation frameworks, test automation, command-line tools, Jira, TestLink, Git and GitHub.

Delivery & leadership: Test planning and management, backlog management, progress tracking, test-results reporting, cross-functional coordination, tester evaluation, coaching and knowledge sharing.

Embedded & programming: C/C++, Python, Java, data structures, SystemVerilog, AUTOSAR (MCAL, ECUAL, OS), RTOS, ARM (TM4C), TriCore TC387, ATmega32, HighTec toolchain.