ISLAM **ELHARIRY**

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SDET with 14 years of expertise in building test automation solutions, utilizing automation frameworks, and applying design principles with design patterns. Adroit at designing out-of-the-box test scenarios using various testing techniques. Skilled at developing strategic test plans with solid risk mitigation procedures. Accomplished in investigating and evaluating new toolchains. Proficient in setting up testing environments and troubleshooting issues. Resourceful in transferring knowledge to new team members and dedicated to supporting mentees and leveraging their perceptions and skills. Possesses excellent research and development skills backed by years of experience.

COMPETENCES

- Programming Languages — Java, C#, C++, C, Python
- Automation Frameworks — TestNG, Pytest | Behave, Robot | Rest Assured, Postman, SoapUI | QTP, Selenium
- IDEs — IntelliJ IDEA, Eclipse, Visual Studio, PyCharm | uVision, S32 Design Studio
- DBMS — Oracle DBMS, MS SQL Server, IBM DB2 | AWS DynamoDB
- SQL Execution — SQL Developer, SQL Server Management Studio, Data Studio, Toad
- Test Mgmt. & Bug Tracking — Rally ALM, Jira, Xray | HP ALM/QC, IBM RQM/RTC
- Requirements Mgmt. & ALM — Confluence, Rational Doors, Caliber RM | TeamForge, CDA ALM, Core ALM
- Version Control & CI/CD — Bitbucket, GitHub, GitLab, SVN, IBM Bluemix | Jenkins, Splunk
- Network & Comm. Protocols — HTTP, SSH, FTP | CAN, CAN FD, UART, SPI, I2C, BLE
- µC & Debuggers — ARM Cortex M4, NXP freescale MPC57xx | WinIDEA
- Automotive Testing — CANoe, CANdelaStudio, CANalyzer, CANdbLib, vTeststudio, CAPL
- Automotive Simulation — Matlab, Simulink, NI LabView, CASTLE, RestBus
- Measurements & PS — Fluke Digital Multimeter, Keysight Oscilloscopes | Toellner PS
- Operating Systems — macOS, Windows, Linux, Raspbian
- Office Suites — Microsoft Office, Google G-Suite, IBM Lotus Notes, Notepad++

EXPERIENCE

JULY 2024 – PRESENT

STAFF SOFTWARE DEVELOPMENT ENGINEER IN TEST, ZF GROUP | IRELAND

- Built an automation solution from scratch to test distributed, cloud-based (AWS) microservices using C#.
- Developed modules for a homegrown test harness/framework using modern design patterns.
- Provided quality-related metrics, such as increased case coverage and reduction in the number of bugs, to the development team in a Kanban/Agile environment.
- Mentored the development team on quality principles and test patterns.
- Supported the establishment of a CI/CD pipeline to build, deploy, and test new releases of the services.
- Ensured that test methods followed industry best practices while evaluating new technologies.

FEBRUARY 2022 – JUNE 2024

SENIOR SOFTWARE TEST ENGINEER, MASTERCARD | IRELAND

- Developing comprehensive test plans that outline the testing approach, resources, schedule, and deliverables, while defining testing strategies based on project requirements, risks, and constraints.

- Leveraging test solutions efficiently and ensuring maintainability by refactoring old modules using object-oriented design principles with design patterns and advocating for their use in code reviews.
- Setting up the test environment and performing necessary maintenance, while effectively reporting any testing environment issues and tracking their progress until resolution and verification.
- Mentoring new team members through knowledge sharing and supporting with testing environment.
- Developing and executing Java-based test suites using Maven, TestNG, and Jenkins to support developers in testing stories, while analyzing regression runs to identify potential issues in applications and services.
- Tracking, prioritizing, and reporting defects, ensuring timely resolution. Collaborating with developers and other stakeholders to understand and resolve issues.
- Responding to production issues, investigating to identify root causes, reporting incidents, and extracting metrics on system performance.

SEPTEMBER 2019 – AUGUST 2021

SOFTWARE TEST ENGINEER, JAGUAR LAND ROVER | IRELAND

- Designed and developed tests in parallel with BDD methodology using: Gherkin for feature scripting; Behave, and Robot with Python for step definition; and C for core functional development.
- Maintained the deliverables in parallel with product development in a Scrum/Agile environment.
- Designed and built testbeds and real-time operating systems prototypes for testing and provided technical expertise on design feasibility, and performance matrices.
- Successfully implemented POC to debug, verify, and validate communication protocols (e.g., UART & I2C) between the NXP Calypso evaluation board and the NI test bench.
- Analyzed and deployed SWC models in Simulink for prototyping on evaluation boards.
- Authored research and development spikes; and co-established source control procedures including branching strategies, development guidelines, reviewing checklists, and merging rules.
- Moderated knowledge transfer sessions with off-site colleagues and collaborated with developers to integrate testing earlier in the software development process.
- Created project plans, specifications, and test environment designs, ensuring successful project delivery.

MARCH 2017 – AUGUST 2019

PRINCIPAL VALIDATION ENGINEER, VALEO | EGYPT

- Established new project roadmaps and successfully migrated to new technologies.
- Provided an accurate estimate of validation activities throughout the software life cycle.
- Developed and implemented an effective testing strategy and established link traces between test cases and OEM requirements to directly assess coverage using traceability matrices.
- Conducted highly-rated training sessions during the induction of newly hired engineers.
- Mentored new and junior engineers by conducting knowledge transfer sessions, and supported them in writing scripts and troubleshooting environmental issues.
- Implemented internal simulation testing methods using specific or generic firmware.
- Verified test environment and system under test, and troubleshot communication and software issues, including fixing mismatched drivers, adjusting Tx/Rx configuration attributes, and verifying flashed firmware/software images.
- Performed hardware analysis and debugging for ECU and testing environment as needed.
- Analyzed OEM requirements and SRS thoroughly, identified attributes of hardware signals, defined sensor and actuator interfaces, and defined signal conditioning requirements.
- Analyzed the system's I/O interfaces including signals and logged errors in the memory of the ECU under test through graphical interpretation and diagnostic requests.
- Developed automated HIL validation scripts in Java using Valeo's automation framework to verify compliance with safety standards for passive and active ADAS ultrasonic systems.
- Reviewed, sorted, and prioritized OEM findings, and advised on the needed corrective actions.
- Successfully met deliverable deadlines including tests and reports of defects opened. Submitted and prioritized firmware errors in issues tracking systems.

- Ensured the readiness of the projects before internal formal technical reviews and ASPICE.
- Explored, analyzed, and advised on new tools before introducing them to the organization.

NOVEMBER 2013 – FEBRUARY 2017

TEST SPECIALIST, IBM | EGYPT

- Successfully provided direction and close supervision to small testing teams in their assigned tasks, requirement analysis, test case development, work products, defects, and test summary reports.
- Ensured compliance with IBM standards during the development of the test strategy and test plans.
- Monitored and mitigated risks identified during the planning process until their closure.
- Collaborated with business analysts to resolve ambiguities and ensure that the planned testing met customer requirements, efficiently establishing requirements traceability matrix.
- Conducted checklist-based and error-guessing tests when system documentation was poor and testing time was severely restricted. Executed static and dynamic test cases, submitted and managed defects.
- Effectively investigated open issues and defects with clients at their sites.
- Conducted technical sessions to introduce automation tools to new members of the testing team.
- Earned recognition from the solution manager for elevating the quality standard of the test process shortly after its implementation, as attested by positive feedback emails.
- Established a reputation as the go-to person for defect management in the team, thanks to exceptional skills in tracing and comprehending issues, and efficiently verifying a high volume of defects daily.

NOVEMBER 2010 – OCTOBER 2013

INFORMATION TESTING I, HP | EGYPT

- Developed data-driven and keyword-driven automation test scripts using C# and VB, including object repositories, reusable actions, and library functions.
- Modified the content management system to allow the creation and editing of marketing banners and updated the configuration management system to manage user permissions.
- Identified and analyzed change requests to revise or remove test cases as necessary.
- Executed test cases, recorded defects, analyzed test results against requirements; and collaborated with stakeholders to clarify defects. Conducted re-testing and sanity checks and prepared test results.
- Monitored peers' execution efficiency, consolidated metrics, and presented findings to higher management in recognition of my outstanding performance.
- Earned a recognition award for exceptional effort in the automation project.

CERTIFICATIONS

AWS – Certified Cloud Practitioner	2021
ITIL V3 – Foundation	2016
CMAP – Mobile App Testing Foundation Level	2015
ISTQB – Certified Tester Advanced Level [Test Analyst]	2015
HP – M47 HP Functional Testing 11.x Software	2011
ISTQB/ISEB – Certified Tester Foundation Level	2011

EDUCATION

SEPTEMBER 2004 - MAY 2009

BACHELOR OF SCIENCE, COMPUTER ENGINEERING | CAIRO UNIVERSITY

Very Good with Honors