Amr H. Metwaly

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SENIOR SOFTWARE & QA ENGINEER

Hands-on senior Software & QA Engineer with solid experience in software development, testing, and quality assurance. Demonstrated expertise in Python, JavaScript (ES6), and TypeScript. Adept at driving projects from inception to execution while balancing competing priorities and leading high-performing teams that consistently deliver quality work products. Excels independently and as part of a team in fast-paced environments.

AREAS OF EXPERTISE

JavaScript (ES6) | TypeScript | Python | Software Engineering | Root Cause Analysis | Testing | Testbench Implementation | Communication Skills

EXPERIENCE

Intel Corporation, Hillsboro, OR (Remote)   **February 2022 – April 2024**
Software Engineer VI
Spearhead developing and optimizing a React-based frontend application, integrating it seamlessly with backend systems, and championed modern software development practices and security compliance. Handled the full software development lifecycle, including automating build processes and rigorous testing using frameworks like Cypress and Jest.

- Utilized modern software development methodologies such as Scrum, Kanban, and XP, adhering to secure coding practices and legal compliance guidelines.
- Engaged in the full application development lifecycle, from analyzing user stories to writing functional and test code.
- Automated build and deployment processes on Jenkins, ensuring swift delivery and maintenance, in addition to reducing time to delivery by 90%.
- Performed comprehensive unit, integration, and end-to-end testing using frameworks like Jest & Cypress, validating software applications used by end users or integrated by ISV partners, increasing coverage to 100%.
- Collaborated with product security engineers to complete SDL tasks, enhancing the application's security posture.
- Acted as a liaison with technical writers to assist in preparing product documentation, including installation and maintenance procedures.
- Conducted regular demos to stakeholders, showcasing business value and tracking progress through key performance metrics.
- Participated in retrospective and "inspect and adapt" sessions, providing input for process improvements in subsequent iterations.
- Engaged with end users to gather system requirements or discuss necessary modifications, ensuring the application meets user needs.

Keysight Technologies, Calabasas, CA, USA (Hybrid)   **March 2020 – February 2022**
R&D Software Quality Assurance Engineer II
At Keysight Technologies, I played a key role in the System Test Team for Ixia's network test applications, focusing on L2/3 routing, switching protocols, and cloud features. Oversaw various areas, including developing and automating tests, analyzing and translating marketing requirements, managing complex test topologies, and enhancing testing frameworks.

- Leveraged existing and developed new test cases to validate new features, protocols, and technologies in the product, requiring a deep understanding of L2/3 routing and switching protocols.
- Designed and executed manual and automated test cases to qualify cloud-related features and protocols in Ixia network test products, involving physical and virtual testbeds focusing on including customer escalations in regression suites.
- Transformed Marketing Feature/Product Requirements Documents into test plans & scenarios while maintaining current documentation.
- Conducted root cause analysis and filed detailed bug reports with appropriate logs and files attached.
- Managed high-scale topologies in system testbeds, ensuring regular updates and maintenance of various components.
- Made significant contributions to the core test harness and its GUI, utilizing Python3, GWT, Apache Tomcat, and SQL.

NetApp (SolidFire), Wichita, KS, USA (Hybrid)   **November 2018 – March 2020**
Student Contractor – Software Engineer in Testing
- Developed features and components in core SolidFire Ember and Element OS (C++ & Bash).
- Developed extensive Test suites && Testcases in an efficient & high-quality unit-tested code in a testing framework (Valence) using Python2/3 to reduce manual testing with a focus on performance, regression, stress, system, and exploratory testing.
- Ran qualification suites and cases, documented results, and debugged failures using the root cause analysis approach to ensure the highest quality and minimize defects and re-call class bugs.

NetApp (SolidFire), Wichita, KS, USA (On-site)   **November 2017 - January 2018**
Student Contractor – Software & Quality Assurance
- Completed preset IOP and vendor Certification testing to validate the integration of SolidFire clusters with different vendors' hardware/software.
- Performed lab maintenance and equipment setup, including switch zoning, cabling, swapping failed components, OS installation, and Storage Cluster(s) setup.
- Scripted in Python to create an interoperability testing tool with a GUI using Tkinter.

NetApp (E-Series), Wichita, KS, USA (On-site)   **June 2016 – November 2017**
Student Contractor – Quality Assurance
- Ran predefined automated and manual test cases on different E-Series storage configurations testing for interoperability.
- Built storage configurations from scratch and set up all layers for testing, including OS installation, network configuration, switch zoning, cabling, swapping failed components, and configuring storage side arrays.
- Scripted in Bash and Python for an internally developed testing framework to minimize manual testing and configuration overhead.
- Documented defects, debugged and analyzed log messages on different hardware components to pinpoint root causes.

EDUCATION
Bachelor of Science in Computer Engineering (Cum Laude) May 2020
Wichita State University, Wichita, KS, USA

TECHNICAL COMPETENCIES
Operating Systems
Linux, Windows Server Desktop, E-Series OS, Ember & Element OS.

Programming Languages, Development Tools, Testing & QA Tools
Python, JavaScript ES6, TypeScript, Nodejs, Bash/Shell Scripting, PowerShell, C++, Java, JSON, HTML5, CSS3, VS Code, PyCharm, Chocolatey, Vim, React, React Native, ElectronJS, Babel, Webpack, MQTT, Eslint, Regex, qTest, Pytest, Cypress, Playwright, Jest, Postman

Version Control & DevOps
Git, Mercurial, Perforce, Azure DevOps, CI/CD, Jenkins, Terraform.

Project Management & Collaboration
JIRA, Confluence, Azure DevOps, GitHub, Gitlab, Bitbucket.

Network & Storage Technologies
Wireshark, L2/3 Networks, SDN, OpenFlow, Mininet, Cisco/Brocade, Keysight IXIA IxNetwork, Keysight IXIA OS, SAN, RAID.
Cloud & Containerization
Azure, Google Cloud, Docker, Kubernetes, Helm, Firebase.

Database, Backend & Documentation
MySQL, SQLite, Workbench, MongoDB, ExpressJS, FAST API, Nginx, Redis, Sphinx, Swagger.

Systems Engineering & Others
OOP, Data structures, Design Patterns, Algorithms, Systems Engineering, SDLC, Distributed Systems, REST API Design, GraphQL, gRPC, Test Automation, Defect Tracking & management.