

MOSTAFA EMAM

Staff Software Engineer in Test | QA Architect | Engineering Leader

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PROFESSIONAL SUMMARY

Results-driven Staff Software Engineer in Test with 10+ years of experience designing enterprise-grade automation frameworks, leading high-performing QA teams, and embedding quality at every stage of the SDLC. Throughout a focused career at Siemens Digital Industries Software, consistently delivered measurable impact: cutting regression cycles by up to 90%, eliminating test flakiness across 700+ automated cases, and reducing cloud infrastructure costs by ~90%. Deep expertise in Python, JavaScript/TypeScript, AWS, and CI/CD — combined with strong business acumen to prioritize testing for the most critical product risks. AWS Certified DevOps Engineer – Professional and ISTQB certified.

CORE COMPETENCIES

Test Automation Architecture	QA Strategy & Risk-Based Testing	Engineering Leadership & Mentorship
CI/CD Pipeline Integration	Cloud & Performance Testing	AI-Augmented QA Tooling

TECHNICAL SKILLS

Languages	Python, JavaScript, TypeScript, Bash
Frameworks	PyTest, Selenium WebDriver, NightwatchJS, Playwright, REST Assured
Cloud & DevOps	AWS (CodeBuild, Device Farm, Lambda, S3, CloudWatch), Docker, Kubernetes
CI/CD	GitHub Actions, TeamCity, Bitbucket Pipelines, AWS CodePipeline, Jenkins
API & Tools	Postman, Swagger, GraphQL testing, BrowserStack, Jira, Confluence, Git
AI / LLM	LLM-driven test reporting, AI-assisted test generation, prompt engineering
Methodologies	Agile/Scrum, SAFe, Shift-Left Testing, TDD, BDD (Cucumber/Gherkin), OKR alignment
Certifications	AWS Certified DevOps Engineer – Professional AWS Certified Solutions Architect – Associate ISTQB Foundation

PROFESSIONAL EXPERIENCE

Staff Software Engineer in Test

Oct 2024 – Present

Siemens Digital Industries Software • Remote — Orlando, FL

- Lead and mentor a team of 15 QA engineers across distributed time zones, establishing engineering standards, OKR alignment, and career growth frameworks amid 50% YoY demand growth.
- Define and own the organization-wide QA strategy, working directly with product and engineering leadership to identify highest-risk areas and build targeted testing plans that protect critical customer workflows.
- Architect and maintain cross-product automation frameworks in Python and JavaScript, enabling consistent test patterns, shared utilities, and 0% flakiness across 700+ automated test cases.
- Integrate AI-driven test reporting using LLMs to surface actionable insights from test runs, dramatically reducing triage time and improving stakeholder visibility into product quality.
- Champion shift-left testing practices and embed QA checkpoints throughout CI/CD pipelines (GitHub Actions, TeamCity), enabling same-day release confidence on critical product lines.
- Drive process improvements that reduced average release cycle time by 30% and eliminated manual regression bottlenecks through parallel cloud execution strategies.

Senior Software Quality Assurance Engineer

Oct 2021 – Oct 2024

Siemens Digital Industries Software • Remote — Cleveland, OH

- ▶ Architected a reusable, modular Node.js automation framework adopted across 4+ product teams, reducing test authoring time by ~60% and accelerating onboarding for new engineers.
- ▶ Reduced regression suite execution from 2 hours to 25 minutes (~75% faster) through parallelization strategies, smart test grouping, and cloud infrastructure optimization.
- ▶ Migrated cloud device testing from BrowserStack to AWS Device Farm, cutting licensing costs by ~90% while expanding real-device browser coverage across critical customer environments.
- ▶ Pioneered the use of LLMs to generate structured regression summaries and automated stakeholder reports, replacing hours of manual documentation with AI-generated insights.
- ▶ Collaborated with product managers to translate business requirements into comprehensive test plans, ensuring coverage of edge cases and highest-priority customer scenarios.
- ▶ Mentored junior and mid-level engineers through pair programming, code reviews, and structured 1:1s, growing multiple engineers into independent contributors.

Software QA Engineer

June 2016 – Oct 2021

Siemens Digital Industries Software • Cairo, Egypt

- ▶ Founded and scaled the Web QA practice from zero, building and automating 1,500+ test cases covering internal portals and external customer-facing web applications.
- ▶ Designed a novel parallel test execution algorithm that decoupled test cases from per-user account dependency, reducing regression time by over 40% and enabling true parallel runs.
- ▶ Built end-to-end automated testing coverage for Salesforce CRM applications, including complex workflow validation, data integrity checks, and regression suites for major releases.
- ▶ Established QA documentation standards, test case management practices (TestRail), and defect triage workflows that became the team baseline adopted org-wide.
- ▶ Contributed to CI/CD adoption by integrating automated test pipelines into TeamCity, enabling continuous quality gates on every code commit.

KEY ACHIEVEMENTS

- ▶ Led end-to-end QA strategy and all automation orchestration for the new Siemens.com — a landmark initiative to consolidate sw.siemens.com, xcelerator.siemens.com, and siemens.com into a single unified digital platform, one of the most high-visibility web projects in Siemens' recent history.
- ▶ Built an entire QA organization from the ground up — personally hired, onboarded, and developed all 15 engineers on the team, growing it from a team of 8 during a period of 50% demand growth while maintaining zero degradation in quality standards.
- ▶ Designed automation frameworks now mission-critical to Siemens Digital Industries Software — deeply integrated across 8 distinct products with no equivalent alternative, making quality infrastructure a true engineering dependency.
- ▶ Eliminated all flakiness across a 700+ case regression suite, enabling fully automated, confidence-gated production releases across multiple product lines.
- ▶ Cut regression execution time by up to 90% and slashed cloud testing costs by ~90% through parallel execution architecture and a strategic infrastructure migration to AWS Device Farm.

EDUCATION

B.Sc. in Biomedical Engineering • Cairo University • Class of 2014 • GPA 3.72 / Very Good