SONA GANESAN

AI/ML QA ENGINEER | LEAD SDET | QUALITY ENGINEERING | TEST AUTOMATION

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PROFESSIONAL SUMMARY

Lead SDET / Quality Engineering professional with 11+ years of experience in SaaS and enterprise products, combining deep automation and release-quality ownership with hands-on AI/GenAI quality engineering. Experienced in Playwright/TypeScript, Selenium/Java/Ruby, REST API testing, SQL-based validation, CI/CD, test strategy and root-cause analysis. Built and evaluated RAG/LLM workflows using Python, embeddings, vector databases and quantitative quality metrics, including hallucination and retrieval evaluation. Strong at translating ambiguous product and model behavior into measurable quality checks, edge cases and maintainable automation.

CORE SKILLS

AI / ML Quality	LLM & RAG evaluation | Prompt/output validation | Hallucination testing | Retrieval quality | Guardrails | Model-quality metrics | Edge-case testing
Automation	Playwright | TypeScript/JavaScript | Selenium WebDriver | Java | Ruby | TestNG | UI/API automation | Framework development
Data & Backend	Python (ML/GenAI projects) | SQL | REST APIs | Postman | REST Assured | JSON | Dataset validation | Vector databases / Chroma
Delivery & Tools	CI/CD | Jenkins | GitHub Actions | Git | JIRA | Regression strategy | Release readiness | Root-cause analysis | Agile/Scrum

AI / ML QUALITY PROJECTS

- Customer Support RAG Evaluation: built an end-to-end RAG evaluation workflow on a ~26,872-record support dataset and 13 SOP knowledge-base documents using Qwen2.5-1.5B-Instruct, all-MiniLM-L6-v2 embeddings and Chroma. Evaluated retrieval and response quality using ROUGE, BLEU and hallucination-rate measurements; compared baseline vs RAG and router variants to identify trade-offs and failure modes.
- LLM Quality & Hallucination Testing: designed complex domain prompts and response checks to assess factual grounding, unsupported claims, instruction adherence and retrieval dependence; used deterministic evaluation runs and structured output analysis rather than subjective pass/fail judgments.
- AI Testing / Visual Quality Exploration: evaluated AI-assisted testing approaches for visual comparison, model-based defect detection and prompt/response quality, with emphasis on measurable severity, fallback checks and CI-friendly automation.

PROFESSIONAL EXPERIENCE

Freshworks | Lead SDET — Jun 2024 - Present

- Own end-to-end quality engineering for complex SaaS capabilities, including requirement analysis, test strategy, exploratory testing, UI/API automation, regression validation, defect management and release sign-off.
- Design and maintain Playwright + TypeScript workflow automation and Ruby-based test frameworks; analyse nightly/bulk-run failures across product, automation, environment and test-data causes and drive fixes to improve reliability.
- Lead ERM/release validation across multiple squads, coordinating feature flags, migrations, staging/production readiness, regression execution, exploratory coverage and risk-based go/no-go inputs.
- Improved regression stability by fixing and optimizing 200+ automated tests and adding targeted cleanup/wait strategies for asynchronous and stale-data scenarios.
- Apply AI-quality thinking to GenAI/Copilot features through exploratory testing, prompt/output validation, edge-case analysis and identification of AI-specific test gaps; collaborate with engineering/product stakeholders on expected behavior and measurable quality criteria.

Chargebee | Lead SDET / Senior QA Engineer — Apr 2020 - Jun 2024

- Led quality engineering for billing and multi-entity systems handling high-value transactions, including Invoice and Multi-Business Entity workflows.
- Implemented end-to-end Selenium + Java automation and expanded high-priority test coverage by ~40%; performed API/backend validation and data checks for complex business workflows.
- Led and mentored QA engineers, reviewed automation approaches, strengthened release validation practices and partnered closely with Product and Engineering on risk assessment and defect triage.

- Spearheaded Early Access Program testing and improved JIRA defect-tracking practices, reducing unnecessary defect-related discussions by ~30%.

First Insight, Inc. | Senior Test Engineer **Dec 2018 - Mar 2020**

- Developed and maintained manual and automated coverage for web/mobile applications across functional, regression, integration and end-to-end scenarios; increased coverage by ~30% and reduced regression execution time by ~25%.
- Collaborated with development and product teams on requirements, defect investigation, release validation and quality-risk identification.

Capgemini | Software Engineer -> Consultant (QA) **Jun 2014 - Nov 2018**

- Progressed through multiple QA roles delivering enterprise testing across requirements, functional/system/integration/regression validation, defect management and release support.
- Contributed to automation/reporting improvements that reduced manual effort by ~40%, while strengthening test coverage, traceability and stakeholder communication.

EDUCATION & CERTIFICATION

IIIT Bangalore | Executive Diploma in Machine Learning & AI **2025 - 2026**

Completed. Focus: Machine Learning, Generative AI, NLP, LLMs, embeddings, vector databases, RAG and model evaluation.

Claude Developer Certification **2026**

Passed certification covering Claude APIs, hooks, Agent SDK and application-development concepts.

SSN College of Engineering | B.E. in Biomedical Engineering **2010 - 2014**

GPA: 8.70 | Anna University Fifth Rank

SELECTED RECOGNITION

Freshworks: Rookie Rockstar Award; Team Excellence Award (Migration Project) | **Chargebee:** Alpha Player, Bias for Action and One-team Awards