CONTACT

rakesh.arrepu@gmail.com
+91-9494671198
Hyderabad, India
https://linkedin.com/in/rakesh-arrepu
https://github.com/rakesh-arrepu

TOP SKILLS

AUTOMATION

Selenium | Playwright | Karate DSL | TestNG | Cucumber | SpecFlow

API TESTING

REST Assured | REST Sharp | Postman | Karate | SoapUI | PACT Contract

LANGUAGES

Java | Python | C# | JavaScript | TypeScript

AI & EMERGING

Generative AI | Agentic AI | LLM | RAG | AI Agents | MCP

DEVOPS & CLOUD

Jenkins | Docker | OCI | AWS

SCM

GitHub | GitLab | BitBucket | Azure

TOOLS

Jira | HP ALM | Qmetry | Zephyr | Bug DB

CERTIFICATIONS

OCI 2025 Generative AI Professional
Oracle
Issued: January 2025

OCI 2025 AI Foundations
Oracle
Issued: January 2025

Agentic AI for Testers
The Test Tribe
Issued: December 2024

Design Patterns in Test Automation
The Test Tribe
Issued: November 2024

EDUCATION

B.Tech (Electronics Communication)
2010 - 2014

Agentic AI Program
John Hopkins University (2025-Present)

LANGUAGES

English
Professional Working

Telugu
Native

Hindi
Professional Working

HOBBIES

Travel | Music | Foodie | Technology | Gadgets | Photography

RAKESH ARREPU

Senior QA Automation Engineer | SDET

"Building AI-First QA Frameworks • 70% Faster Testing • Framework Architect Pioneering Where Agentic AI Meets Enterprise QA"

Professional Summary

Impact-oriented Quality Engineering leader with **11+ years** of SDET expertise across **Oracle Cloud, Airlines, HR & Legal, Healthcare, and Logistics** domains. Architect of enterprise-grade automation frameworks using **Selenium, Playwright, and REST Assured**, engineered for complex microservices and distributed systems. Proven record of accelerating regression cycles by **70%** and sustaining **85%+ automation coverage**. Specialist in validating **microservices ecosystems, API orchestration layers**, and multi-system data workflows.

Early pioneer in AI-augmented testing, embedding **AI agents and LLM-powered intelligence** into quality workflows. Active industry voice with **2000+ LinkedIn followers**, publishing on AI agents, generative AI in testing, and modern QA practices. **Builds automation as a platform capability. Engineers quality to scale with the business.**

Professional Highlights

70% Faster Regression Execution	**85% Coverage** Automation Achievement	**2X OCI Gen AI** AI & Cloud Expert	**Test Strategy** Framework Architect	**AI Pioneer** Early Adopter in Testing

Professional Experience

Senior Software QA Engineer

Oracle India Private Limited • Hyderabad, India • Feb 2022 - Present

- Led end-to-end Quality Engineering for **Oracle Hospitality OPERA Reporting & Analytics**, validating enterprise reporting, analytics dashboards, cross-property data aggregation, and KPI accuracy across distributed hospitality platforms
- Architected and implemented scalable automation frameworks for microservices using **Karate DSL**, enabling API validation, contract testing, and integration coverage across complex service ecosystems
- Spearheaded migration from legacy automation frameworks to the modern **OPERA test framework**, leveraging rule-driven automation strategies and Cline Rules capabilities to standardize execution and improve maintainability
- Engineered a unified reporting utility framework functioning as a plug-in layer across Karate, GraphQL, and Selenium-based OPERA automation suites, enabling consolidated execution metrics, coverage insights, and failure analytics
- Designed and built a full-stack **Playwright E2E framework** supporting UI and API validation in BDD format, streamlining cross-layer test orchestration within a single execution model
- Implemented Playwright visual comparison capabilities to establish robust visual regression validation, safeguarding UI consistency across releases and environments
- Owned QA release governance and sign-off for production deployments, enforcing **zero-defect standards** and ensuring reporting data integrity across enterprise releases
- Acted as **Quality Key Holder for an Agentic AI-driven QA framework**, validating autonomous agent accuracy, behavioral consistency, drift detection, and coverage analytics across testing workflows
- Mentored engineers through structured knowledge transfers, architectural reviews, and code quality governance, elevating automation standards and team velocity

Analyst

ValueLabs LLP • Hyderabad, India • Jan 2020 - Feb 2022

- Led Quality Engineering initiatives for **United Airlines**, validating large-scale applications having data flow through multiple systems
- Architected a comprehensive **Hybrid Framework** combining UI + REST API automation framework, scaling automation coverage to **85%** and eliminating **30+ hours** of manual effort per cycle through optimized test orchestration
- Delivered high-impact Proof of Concept initiatives with an **80% client approval rate**, influencing implementation decisions and accelerating automation adoption
- Owned large-scale test execution governance and quality reporting, ensuring release stability and operational confidence across global deployments
- Mentored engineers through **QA-to-QE transition programs**; delivered intensive training in Java, Selenium, and BDD to elevate automation maturity across product teams

Senior Quality Automation Engineering | I-9 & E-Verify Platforms

Sails Software Solutions • Hyderabad, India • Jul 2017 - Jan 2020

- Served as the **sole QA owner** in an Agile delivery model, driving end-to-end quality strategy, test design, automation development, and defect lifecycle management for I-9 and E-Verify platforms
- Owned complete **I-9 platform** responsibility during the foundational phase, ensuring comprehensive validation of identity verification workflows, employment authorization processes, and compliance adherence for U.S. immigration systems
- Architected and implemented BDD automation using **SpecFlow (Gherkin + C#)**, enabling executable specifications, traceability between business requirements and test scenarios, and collaborative validation with stakeholders

PUBLICATIONS

- **Playwright CLI vs MCP**
  130,836 views
- **Selenium x Playwright x Cypress**
  2,705 views
- **Playwright CLI Cheatsheet**
  836 views

AWARDS

- **"STAR of the Month"**
  2021
  Value Labs
- **"SMART" Award**
  2017
  Syntel
- **Team "Adaptive"**
  2016
  Syntel

AFFILIATIONS

Ministry of Testing
Engaged Community Member
2023 - Present

LinkedIn QA & AI
Content Creator & Thought Leader
2021 - Present

GitHub Open Source
Contributor & Maintainer
2020 - Present

QA Conferences
Active Participant
2023 - Present

- Validated **REST API services** and SSO integrations using **Postman** with automated request triggers, response schema validation, and OAuth 2.0 authentication flows for E-Verify services
- Integrated test automation into **Jenkins CI/CD pipelines** with automated test execution triggers, Extent Reports for real-time test visibility, and email notifications for build status and quality metrics
- Delivered comprehensive **test plans, test scenarios, execution governance**, and defect tracking, ensuring 100% requirement traceability and complete platform validation before production releases

Software Engineer

Syntel India Private Limited • Pune, India **Feb 2015 - Jun 2017**

- Analyzed requirements and designed comprehensive test strategies, executing **functional, regression, UAT, and smoke testing** within Agile delivery cycles
- Tested **FedEx ePAT (Enterprise Pricing Analyst Toolkit)** for PnL statements, acting as a Pricing Analyst to validate complex rate calculations, financial logic, and data accuracy
- Developed automation scripts with **Selenium-based Internal tool and QTP Tool**

Key Projects & Achievements

ETL Sentinel — AI-Powered Autonomous Data Migration Validation at Scale

Python | Oracle DB | OCI GenAI | Fuzzy Matching | SQL | Parallel Processing | Statistical Validation | Adaptive Sampling

Built a fully autonomous, AI-powered framework that validates data migration integrity across Oracle Database migrations using intelligent fuzzy matching, OCI GenAI-driven schema discovery, and adaptive statistical validation. Eliminated manual triage through automated issue classification and executive-level reporting.

Impact: 900+ tables validated • 100% schema discovery accuracy • 3-tier adaptive validation • 80% triage time reduction • Executive reporting dashboard

Schema Intelligence Engine — Agentic AI-Powered GraphQL Payload Generation with Self-Learning Fusion

Python | OCI Generative AI | GraphQL | Apollo | Pydantic v2 | Click CLI | Rich | Jaro-Winkler | Jaccard Similarity | Custom WeightedMatcher

Engineered an agentic AI engine that intelligently fuses Apollo GraphQL schemas with database metadata using OCI GenAI. Automates production-ready GraphQL payload generation by resolving field name mappings across schema sources through hybrid matching algorithms, confidence-scored categorization, and a self-correcting learning system — processing 115K+ fields at scale.

Impact: 98% reduction in LLM API calls • 115K+ fields processed • Self-improving accuracy • 100% payload validation • Fuse once, generate unlimited payloads

OHRA Reporter — Zero-Infrastructure Test Intelligence Dashboard

Python | HTML5 | CSS3 | JavaScript | Chart.js | JUnit | Karate | pytest | Jenkins | CI/CD

Built a self-contained reporting platform that transforms raw test execution data from any major framework into executive-ready interactive dashboards — featuring cross-environment comparison, regression detection, SLA health scoring, and statistical significance testing. Deploys as a single HTML file with zero infrastructure dependencies, integrating directly into CI/CD pipelines.

Impact: Test triage reduced from hours to seconds • 4-environment comparison • 100% framework-agnostic • Zero-dependency deployment • Data-driven go/no-go decisions

GraphQL API Regression Framework — 2,200+ Auto-Generated Test Cases Across 534 Views, Zero Manual Authoring

Python | Pytest | Pydantic v2 | GraphQL | OAuth 2.0 | Allure | Pandas | pytest-xdist | CSV | NDJSON | HTML Dashboards

Architected a schema-driven, data-driven test automation platform that auto-generates 2,200+ parametrized test cases per run from JSON schema snapshots — covering 534 GraphQL views across 75 subject areas with 46,600+ column mappings. Features a 3-phase pipeline (Ingestion → Generation → Execution), parallel execution, and pluggable modular architecture across 154 source modules (~43K LOC). Onboarding a new API version requires just 4 JSON files — zero test rewrites.

Impact: 2,200+ test cases auto-generated • 534 views × 46,600+ column mappings • 6 schema versions covered • Regression reduced to single pipeline run • 100% schema-driven onboarding • Cross-version drift detection

Agentic AI QA Framework — Evaluating & Factual Grounding for AI Agents

Python | OCI Generative AI (Cohere) | sentence-transformers | Oracle OPERA Cloud APIs | Rich | NumPy | LLM-as-Judge

Engineered an automated evaluation platform that validates AI agent responses against live backend API data using a three-tier assessment engine — LLM-based comparison, deterministic guards, and semantic fallback. Systematically catches hallucinations, data mismatches, and behavioral regressions by independently fetching ground-truth from OPERA Cloud APIs and scoring accuracy, toxicity, bias, and tone across hundreds of prompt variations. Template-driven authoring enables non-engineers to add test scenarios via JSON.

Impact: 100% automated hallucination detection • Three-tier evaluation with zero single points of failure • Precision, Recall, F1 metrics powering go/no-go decisions • QA cycle reduced from hours to single-command runs • TP/FP/FN/TN tracking per prompt • Behavioral safety coverage

Playwright Full-Stack Regression Framework — Unified UI + API Validation for Oracle RnA Portals

TypeScript | Playwright | REST API | Oracle RnA Portal | Admin Portal APIs | Platform System APIs | Visual Regression Testing | Codegen | HTML Reporter

Architected an end-to-end TypeScript-based Playwright framework for Oracle RnA Application Portal that orchestrates a complete cross-system validation workflow — generates test data via Admin Portal APIs, executes UI regression suites on the RnA Portal, and validates downstream data integrity against Platform System APIs. Includes pixel-level visual regression testing, delivering full-stack traceability across three interconnected systems in a single automated pipeline run.

Impact: 44+ hours saved per release cycle (26hrs manual regression + 6hrs data generation + 12hrs integration testing) • 3-system orchestration automated — Admin Portal API → RnA UI Execution → Platform System API verification • Pixel-level visual regression catching UI/UX drift across every RnA Portal release • 100% full-stack traceability from data creation through cross-system verification in one pipeline