

Sai Vikram k  
SDET / Test Automation Engineer  
Vikramksv95@gmail.com  
+1 (862) 362-4582

**Professional Summary:**

- Seasoned and detail-oriented **SDET / Test Automation Engineer** with over 8 years of experience in building, executing, and maintaining automated test frameworks for API and UI testing in Agile and BDD-driven development environments. Specialized in leveraging **Karate DSL** for robust and scalable API automation, including schema validation, mocking, parallel execution, and dynamic test data generation. Skilled in **Cucumber BDD frameworks**, writing Gherkin-based scenarios that align with business logic and improve collaboration across QA, development, and product teams.
- Proficient in browser-based UI automation using **Selenium WebDriver** and **Cypress**, validating front-end workflows in Angular and React applications with a focus on performance and cross-browser compatibility. Strong expertise in building modular and reusable automation frameworks using Java, TestNG, and JUnit, and integrating those with **CI/CD pipelines** via Jenkins, GitHub Actions, and GitLab CI/CD for continuous validation and deployment.
- Experienced in testing **RESTful and SOAP APIs**, including validation of FHIR-compliant healthcare APIs for claims, billing, and patient data systems. Developed automation utilities and step definitions in Java and Groovy to support advanced JSONPath assertions, header manipulation, and reusable Karate functions. Implemented **contract testing using Pact**, enabling backward compatibility assurance across microservice interfaces and enforcing contract-first design principles.
- Demonstrated ability to use **Postman and Newman** for both exploratory API testing and automated collection-based test execution. Created controlled test environments through Karate's built-in mocking features, facilitating isolated integration tests even when upstream/downstream services were unavailable.
- Hands-on with validating **Kafka streams** and event-driven architectures by verifying Avro and JSON message payloads within automation frameworks. Led efforts in configuring **parallel test runners**, reducing total regression suite time while maintaining high coverage and confidence levels. Generated real-time, rich test reports using Allure and ExtentReports and integrated those with dashboards for visibility during sprints and releases.
- Familiar with managing **test data** through MongoDB queries, SQL scripts, and data-driven testing using Excel, CSV, and in-memory datasets. Conducted performance testing using JMeter for high-load APIs and included test execution in CI pipelines with integrated alerting. Actively contributed to **shift-left testing** strategies by engaging with development teams from the early stages of the SDLC, helping define acceptance criteria and automating pre-release validations.
- Utilized log monitoring and debugging tools like **Kibana, Splunk, AWS CloudWatch**, and Grafana to analyze failures and enhance test resilience. Adept at documenting test architecture, strategies, and reusable assets, while mentoring junior QA engineers and enforcing best practices across automation teams.
- Experienced in implementing **test-first design** approaches by participating in story grooming and defining clear acceptance criteria using BDD tools.
- Developed and maintained **custom test harnesses** using Java and Maven to support hybrid automation between REST APIs and event-based services.
- Proficient in **mocking third-party APIs and downstream services** using WireMock and Karate for better control over integration test environments.
- Hands-on experience integrating automation test results with **test management tools like Xray, Zephyr, and TestRail** to ensure traceability and audit compliance.

- Led **automation code reviews**, standardized test case structures, and enforced reusable test design patterns across large QA teams.
- Designed test strategies and automation suites for **mobile-first applications** using Appium and Karate mobile testing extensions.
- Familiar with using **Karate Gatling** module for performance testing of APIs in BDD-style syntax, reducing tooling overlap.
- Automated backend validations for **ETL pipelines** using Apache Spark checkpoints and API assertions to verify transformation accuracy.
- Skilled in working with **OAuth2.0 flows**, refreshing tokens dynamically during API test executions using Karate's Java interop.
- Participated in **cross-browser compatibility testing** using BrowserStack/Sauce Labs integrated with Cypress and Selenium grids.
- Built visual regression pipelines using **Cypress snapshots** and integrated them with GitHub Actions to catch layout/UI bugs early.
- Collaborated with security teams to incorporate **API security tests** into functional regression suites using OWASP test cases in Postman.
- Documented **test automation strategies** for enterprise-wide QA centers of excellence (CoE), promoting reusable libraries and test best practices.

Category	Skills
Test Automation Frameworks	Karate DSL, Cucumber (BDD), Selenium WebDriver, Cypress, REST Assured, Postman/Newman, JUnit, TestNG, Mockito, Jest, Mocha, Chai
API Testing & Tools	Swagger/OpenAPI, Postman, WireMock, Pact, Karate Mock Server, GraphQL Testing, JSONPath/XPath Validations
UI Automation	Cypress, Selenium WebDriver, Protractor (legacy), Playwright (basic exposure)
Languages & Scripting	Java, JavaScript, TypeScript, Groovy, Shell Scripting, SQL
Performance Testing	JMeter, Karate-Gatling, Load Testing via Postman/Newman
CI/CD & DevOps	Jenkins, GitHub Actions, GitLab CI/CD, Docker, Kubernetes, ArgoCD
Cloud Environments	AWS (Lambda, S3, API Gateway, CloudWatch), Azure (AKS, DevOps), GCP (GKE, Cloud Functions)
Databases (Test Data Management)	PostgreSQL, MySQL, MongoDB, Oracle, Redis, Cassandra
Version Control	Git, GitHub, Bitbucket, GitLab, SVN
Monitoring & Logs	Kibana, Splunk, Grafana, AWS CloudWatch, ELK Stack
Test Reporting	Allure, ExtentReports, HTML Reports, TestNG Reports
Test Methodologies	BDD, TDD, Agile, Scrum, Shift-left Testing
IDE & Editors	IntelliJ IDEA, VS Code, Eclipse, WebStorm
Project Management & Collaboration	JIRA, Confluence, XRay, Zephyr, Rally

### Professional Experience:

**Client:** Cigna, Morris plains, New jersey  
**Role:** Senior SDET / QA Automation Engineer  
**Responsibilities:**

**May 2024 - Present**

- Designed and implemented **automated API test frameworks** using **Karate DSL** to validate RESTful healthcare microservices including appointment, billing, and patient modules.
- Developed **BDD test cases** using **Cucumber** with Gherkin syntax to validate end-to-end scenarios across business workflows and user journeys.
- Integrated **Karate + Cucumber** tests with GitHub Actions for nightly regressions, tagging tests by type (smoke, regression, contract) to support rapid deployments.
- Implemented dynamic data-driven validations and reusable step definitions for FHIR-compliant healthcare services using JSONPath and scenario outlines.
- Performed **backend service validation** using **JUnit 5, Mockito, and TestContainers**, mocking DB dependencies and validating API behavior in isolated containers.
- Validated **GraphQL endpoints** using Karate's GraphQL support, ensuring correct query execution, mutations, and schema integrity.
- Automated **UI regression testing** using **Cypress and Selenium WebDriver**, integrating visual validations, DOM assertions, and cross-browser compatibility.
- Used **Karate's Mock Server** and **WireMock** to simulate downstream service responses and enable isolated integration tests for microservices.
- Verified **Kafka stream payloads** and tested event-driven interactions using Karate + Java matchers and schema registry stubs.
- Implemented **contract testing with Pact**, validating API interface stability and ensuring backward compatibility during service releases.
- Built and maintained CI/CD pipelines to run tests in Docker containers with automated reporting through **Allure and ExtentReports**.
- Designed and maintained a centralized **Karate-based API testing framework** for validating over 50+ REST endpoints used across claims, billing, and appointment modules in the healthcare ecosystem.
- Created reusable **Karate feature files and background setups**, allowing for dynamic token generation, global configurations, and environment-based test parameterization.
- Built custom **Java interop functions in Karate** for advanced validations such as digital signature verification, timestamp tolerances, and external DB lookups for test assertions.
- Implemented **end-to-end BDD workflows** with **Cucumber + Karate**, integrating Gherkin scenarios with backend API validations to bridge QA and business teams in behavior modeling.
- Designed and executed **multi-layered Cucumber test scenarios** covering API + Kafka event assertions, ensuring correctness in both service contract and downstream event triggers.
- Integrated Karate test executions with **Jenkins and GitHub Actions pipelines**, applying dynamic test tagging (@smoke, @regression, @security) to support targeted runs.
- Automated **mock API setups using Karate's mock server**, simulating third-party service behavior for isolated API testing and failover simulation scenarios.
- Used **Karate match and assert DSL** to validate complex nested JSON structures, healthcare-specific FHIR response payloads, and conditional elements using expressions.
- Generated and maintained **Allure reports for Karate tests**, providing stakeholders with visually rich, traceable summaries of regression executions and business rule validations.
- Collaborated with product owners and architects to translate acceptance criteria into **Cucumber features**, integrating test cases directly from Jira/XRay workflows.
- Deployed test suites into **Kubernetes-based test environments (AWS EKS, GKE, AKS)** using Helm, enabling scalable parallel execution.
- Developed ETL validation suites to assert correctness of data transformation using PySpark, JSON assertions, and Hive queries.
- Implemented test versioning and tagging strategies for APIs using **OpenAPI + Swagger**, enhancing test governance and change tracking.
- Conducted **API security testing** for JWT, OAuth 2.0, and RBAC implementations to ensure compliance and protect sensitive healthcare data.
- Integrated **performance and load testing** with JMeter for REST APIs and SOAP endpoints, and ran tests as part of CI job chains.

- Wrote and validated complex SQL test data scripts for MongoDB, PostgreSQL, Cassandra, and Redis to support automation consistency.
- Collaborated with product owners and architects to translate acceptance criteria into **Cucumber features**, integrating test cases directly from Jira/XRay workflows.
- Enabled **parallel test execution in Karate** using Maven Surefire with Cucumber runners, reducing full regression cycle time by more than 60%.
- Led efforts to implement **service mocking, header-based routing, and rate limit simulation** within the Karate test environment to mirror real-world scenarios.
- Incorporated **OpenAPI schema validations** in Karate using custom scripts and test assertions to catch contract mismatches early in the development cycle.
- Automated system monitoring alerts validation using **Kibana, Prometheus, Grafana, and CloudWatch**, simulating failure events and validating recovery alerts.
- Developed **test orchestration workflows** for long-running backend jobs using Karate + Java concurrency, mirroring real-time patient claims processing.
- Maintained test architecture documentation and conducted automation training workshops for onboarding QA engineers and developers.

**Environment:** Karate, Cucumber, Java, Cypress, Selenium WebDriver, JUnit 5, TestContainers, Mockito, Kafka, Postman, JMeter, Jenkins, GitHub Actions, AWS Lambda, DynamoDB, GCP, MongoDB, Cassandra, SQL, Swagger, Pact, Prometheus, Allure, Grafana, PySpark

**Client:** FHL Bank, Atlanta, GA

**Jan 2023 - April 2024**

**Role:** SDET / Test Automation Engineer

**Responsibilities:**

- Designed and maintained **Cucumber BDD automation framework** for validating Angular UI and Java backend integration, supporting both positive and negative path scenarios.
- Automated full **UI regression testing** using **Cypress**, validating interactive Angular components, state transitions, lazy loading, and route guards.
- Created reusable Gherkin-based test cases in **Cucumber** integrated with Karate for cross-layer validation involving frontend actions and backend API assertions.
- Developed automated tests for **GraphQL endpoints** and RESTful APIs using Karate, enabling efficient validation of query structure, mutations, and response payloads.
- Automated **Kafka-based messaging validations** using Karate and custom matchers for Avro schema-based payloads across event-driven services.
- Built and integrated **contract testing suites using Pact**, ensuring microservice compatibility and supporting consumer-driven API development.
- Developed custom middleware mocks using Karate's built-in server, allowing isolated test executions independent of legacy dependencies.
- Managed test orchestration in **OpenShift** with Dockerized test containers and parallel execution configurations using Helm + Kustomize for testing across clusters.
- Validated end-to-end workflows with **Spring Security and OAuth 2.0** by automating token-based access controls and RBAC policies within secured APIs.
- Used Cypress and Jest to validate UI components for trade and loan dashboards, combining DOM assertions with API hooks for complete workflow verification.
- Built and maintained automation in **CI/CD pipelines** using Jenkins and GitHub Actions, automating triggers for pull requests and nightly regressions.
- Conducted test data setup and teardown using PostgreSQL, MongoDB, and MySQL scripts integrated into Karate and Java utility methods.
- Authored test suites to validate **Kafka message transformation pipelines** via Apache Camel and Avro, ensuring schema compliance and transformation accuracy.
- Collaborated with developers and DevOps teams to shift test execution earlier in the SDLC, adopting **shift-left testing practices**.

- Designed **custom Cucumber hooks** (@Before, @After, and tag-specific filters) to manage test data setup, DB state cleanup, and scenario isolation for consistent test executions.
- Extended Karate framework with custom **Java step definitions** and reusable utilities for test parameterization, dynamic payload creation, and reusable headers.
- Integrated **Karate's callSingle and configure blocks** to streamline authentication flows (OAuth token caching, headers injection) across all API scenarios.
- Developed **Karate Gatling-based performance test scripts** for high-traffic financial APIs, integrating them into CI for baseline SLA monitoring.
- Used **Karate's match contains deep** feature to assert multi-level nested payloads in banking-related APIs, validating complete schema and content in real-time.
- Leveraged **Karate's retry-until and polling logic** for testing asynchronous flows like transaction status updates and message queue-based confirmations.
- Validated **JWT tokens and claims** in API responses using custom Karate JS functions to ensure proper scopes, expiration, and signature structure.
- Created **environment-specific property overlays** for dynamic testing across SIT, UAT, and staging using Karate's built-in configuration profiles.
- Built a **Cucumber plugin bridge** for executing Karate test results alongside UI test outcomes for unified test reporting in Allure.
- Authored **Karate-based smoke test packs** that were configured to run as part of daily scheduled jobs to catch API contract breakages early.
- Contributed to **mock-first API development** by helping developers prototype using Karate Mock Server during backend unavailability, accelerating frontend test delivery.
- Utilized **Selenium WebDriver** for cross-browser testing where Cypress lacked support, especially for iframe-heavy components and edge-case workflows.
- Monitored execution metrics and test health through Allure dashboards, and maintained quality gates for automation using SonarQube plugins and Git hooks.
- Led QA code reviews and mentored junior automation engineers on Karate scripting, Cypress debugging, and mocking techniques.
- Implemented lightweight performance checks for APIs using JMeter, validating latency and throughput under expected user load.

**Environment:** Karate, Cucumber, Cypress, Pact, Selenium WebDriver, Jenkins, GitHub Actions, Spring Boot, Kafka, PostgreSQL, MongoDB, MySQL, Java, GraphQL, OAuth 2.0, OpenShift, Docker, Helm, Apache Camel, JUnit, Jest, IntelliJ IDEA, Avro, Allure, Git

**Client:** Precise Software Solutions, Inc, Rockville, MD

**Oct 2020 - Dec 2022**

**Role:** QA Automation Engineer / SDET

**Responsibilities:**

- Designed and implemented **Cypress test automation** framework for validating responsive UI components built in Angular (8+) and React.js.
- Automated **single-page application (SPA) workflows** using Cypress and integrated tests into GitLab CI/CD for continuous validation across deployments.
- Developed **REST API test collections in Postman** and automated them using Newman CLI to support integration and smoke testing in CI jobs.
- Created custom Java utilities and modular test functions to support **data-driven testing** using CSV and JSON data sources.
- Wrote **BDD-style Cucumber scenarios** for cross-functional test alignment, focusing on high-impact business flows and critical validations.
- Validated microservice APIs with **Karate DSL**, writing feature files for key flows such as authentication, data retrieval, and validation checks.
- Executed **end-to-end UI + API test scenarios**, integrating Karate and Cypress results for combined regression analysis.

- Used Cypress to test dynamic DOM behavior, API-driven UI rendering, and client-side routing with mocked/stubbed API responses.
- Participated in shift-left testing by reviewing API contracts, Swagger definitions, and helping define automation criteria during grooming sessions.
- Integrated test cases into **GitLab CI pipelines**, enabling automatic trigger on merge requests and nightly regression cycles.
- Built reusable page object patterns and selectors in Cypress to enable scalable automation for forms, navigation menus, and modals.
- Performed accessibility testing and cross-browser validations using Cypress extensions and manual fallback validations for legacy Edge and Firefox issues.
- Used **JUnit and Mockito** for backend service validations and unit test coverage during development, promoting test-first strategies.
- Developed exploratory and negative API tests using Postman, validating HTTP status codes, response structures, and edge cases.
- Contributed to improving test reporting and traceability by configuring Allure and generating HTML reports post-build.

**Environment:** Cypress, Karate DSL, Cucumber, Java, Postman, Newman, GitLab CI/CD, JUnit, Mockito, Angular 8+, React.js, HTML5, CSS3, AWS EC2/Lambda, GCP, Docker, GitHub, GitLab, Jenkins, Swagger

**Client:** Kellton Tech, Hyderabad, India

**Sep 2018 - Sep 2020**

**Role:** QA Automation Engineer / SDET

**Responsibilities:**

**Sep 2018 – Sep 2020**

- Developed early-stage test automation scripts for **REST APIs using REST Assured and Karate**, validating CRUD operations and integration points with MySQL-backed services.
- Introduced **Cucumber BDD practices** to enhance collaboration between QA and dev teams, writing feature files for business-critical API and UI workflows.
- Automated unit and integration test cases using **JUnit and Mockito**, ensuring code coverage for service layers, controllers, and DAO components.
- Conducted backend validations and test data verification for **SOAP and REST services**, integrating request-response assertions in XML and JSON formats.
- Used **Selenium WebDriver** to build smoke and sanity test suites for JSP/Struts-based legacy modules with dynamic UI components.
- Built automated API tests for SOA-based Java applications, simulating asynchronous flows using JMS stubs and mocks.
- Created reusable assertion libraries in Java for testing session beans, database transactions, and business logic validations.
- Leveraged **TDD practices** during middleware service development, writing tests before implementation and validating behavior through mocks and stubs.
- Performed cross-browser manual and automated UI testing using Selenium Grid and browser-specific configuration files.
- Used **Karate's JSONPath and regex matchers** to validate financial data retrieved through exposed REST endpoints.
- Automated API regression cases and incorporated them into Jenkins pipelines for consistent testing during deployment phases.
- Participated in **test design and traceability mapping** using functional requirement documents (FRDs) and system requirement documents (SRDs).
- Conducted **user acceptance testing (UAT)** support by preparing demo test data and executing test cases in collaboration with product owners.
- Logged and managed bugs via Rally, participating in daily Agile stand-ups, sprint planning, and QA retrospectives to optimize delivery cycles.

**Environment:** Karate, REST Assured, Cucumber, Selenium WebDriver, JUnit, Mockito, Jenkins, Java, Spring MVC, Hibernate, JSP, AngularJS, MySQL, SOAP, REST, TDD, Struts, Rally, Agile, Bitbucket

**Client:** Nihar solutions, Hyderabad, India

**June 2016 - Aug 2018**

**Role:** QA Engineer / Test Automation Developer

**Responsibilities:**

- Developed foundational test automation scripts using **JUnit**, **TestNG**, and **Mockito**, validating service-layer components and ensuring functional correctness for early microservices architecture.
- Participated in test-first development by practicing **TDD methodologies**, writing unit and integration tests during the development of Java RESTful and SOAP-based services.
- Created automated API validation scripts using **REST Assured** for early-stage REST endpoints and introduced JSON and XML schema checks for backend services.
- Conducted **UI testing using Selenium WebDriver** for JSP/AngularJS components, validating form behaviors, table data rendering, and page navigation.
- Contributed to manual and automated testing of event-driven systems integrated with **JMS, RabbitMQ, and ActiveMQ**, validating message payloads and delivery status.
- Developed functional test cases for authentication workflows involving **OAuth 1.0, LDAP, and JAAS**, ensuring secure access control validation across modules.
- Integrated test execution into Jenkins jobs to establish one-click verification pipelines for staging and test environments.
- Simulated service interactions using test stubs and mocks during initial **Apache Camel** orchestration testing for workflow validations.
- Wrote SQL and NoSQL test scripts to validate data integrity across Oracle, PostgreSQL, and MongoDB, ensuring accurate backend state validation post-API execution.
- Used Log4j and Splunk to track system logs and validate test outcomes, helping identify root causes during regression runs.
- Supported Agile testing ceremonies by contributing test estimations, scenario breakdowns, and retrospective insights to improve sprint-level QA.
- Documented API testing strategies and early regression suites to support project onboarding and release readiness checklists.

**Environment:** JUnit, TestNG, REST Assured, Selenium WebDriver, Java, SOAP/REST, LDAP, RabbitMQ, ActiveMQ, Jenkins, Oracle, PostgreSQL, MongoDB, Log4j, Shell Scripting, Agile, SVN