

# SAI KEERTHANA BALA

## Software Development Engineer in Test

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### Professional Summary:

- Software Development Engineer in Test (SDET) with **5+ years of experience** in designing, developing, and executing **automated and manual test solutions** for **web-based, API-centric, and technically complex applications** within an **Agile SDLC**.
- Experienced in **functional, system, end-to-end, exploratory, and regression testing** for **web-based and API-driven applications**, including technically complex products such as APIs and integrations.
- Proficient in designing and executing **verification test cases** from **system requirements and user stories**, performing **code-diff analysis**, and developing **robust regression strategies**.
- Strong expertise in validating **SDKs, RESTful APIs, and backend services** through **system-level, end-to-end, exploratory, and regression testing**
- Strong hands-on experience in **test automation using Selenium, Playwright, Cypress**, and scripting automated tests using **Python and Java**, with working knowledge of **test-driven methodologies**.
- Skilled in **defect investigation, root cause analysis, and validation of fixes**, with experience creating **test plans, traceability matrices, and test reports** in collaboration with development and quality stakeholders.
- Adept in **CI/CD environments** using **Jenkins, GitHub**, and test management tools such as **JIRA and ALM**.
- Demonstrated ability to work independently, communicate effectively, and continuously enhance technical expertise.
- Additionally, building expertise in **AI-assisted testing**, including **test case generation, test data creation, defect analysis, and automation optimization** using **AI/ML concepts and tools**.
- Currently expanding skills in **emerging QA and automation technologies** and actively contributing to **QA-focused workshops and learning platforms**.

### Technical Skills:

Test Automation & QA Tools	Selenium WebDriver, Selenium Grid, Selenium IDE, Cypress, SOAP UI, Cucumber, TestNG, JUnit
Programming & Scripting Languages	Java, Python, JavaScript, HTML, CSS
Defect & Test Management Tools	JIRA, Bugzilla, HP Quality Center (ALM)
Build & Dependency Management Tools	Apache Maven, Apache Ant
Automation Frameworks & Design Patterns	Page Object Model (POM), Data-Driven Framework, Keyword-Driven Framework, Hybrid Automation Frameworks
AI & Intelligent Testing	AI-assisted Test Case Generation, Intelligent Test Data Generation, Self-Healing Automation Concepts, Defect Pattern Analysis, Test Impact Analysis, Exploratory Testing with AI Support
Testing Methodologies & SDLC Models	Agile-Scrum, Waterfall, V-Model
Databases & Data Validation	Oracle, MySQL, SQL Server, MS Access, Toad

## Professional Experience:

### Senior QA Engineer / SDET

Client: California State Client

(Medicaid Systems)

Location: Sacramento, CA

Duration: Dec 2024 – Present

#### Responsibilities:

- Actively participated in **Agile SDLC ceremonies** including daily stand-ups, sprint planning, reviews, and retrospectives, collaborating closely with development, product, and business stakeholders.
- Reviewed **system specifications, business requirements, and user stories**, translating them into **comprehensive test scenarios, verification test cases, and test data**.
- Performed **system-level, end-to-end, integration, exploratory, regression, and smoke testing** for large-scale **state-funded Medicaid applications**.
- Led **end-to-end testing of provider enrollment and credentialing workflows**, identifying and resolving **150+ defects across multiple releases**, ensuring regulatory and functional compliance.
- Developed and executed **automated regression and smoke test suites** for cross-browser web applications, reducing manual testing efforts by **40%+ per sprint**.
- Created **data-driven and keyword-driven automation scripts** using **Python and Robot Framework** for both **UI and API layers**.
- Executed automated and manual tests for **.NET and web-based applications**, analyzing results and reporting defects with detailed root-cause analysis.
- Performed **backend and data validation testing** using **SQL** to verify eligibility determinations, claims processing, and data integrity.
- Reviewed **code changes and enhancements** to identify test impact areas and contribute to **robust regression strategies**.
- Supported **System Integration Testing (SIT), User Acceptance Testing (UAT) and Production Environment** by coordinating testing efforts with state agencies, vendors, and business users.
- Created and maintained **test plans, traceability matrices, test execution reports**, and defect metrics, ensuring transparency and audit readiness.
- Acted as a liaison between **QA, development, and stakeholders**, ensuring clear communication of defects, risks, and release readiness.
- Assisted with **risk assessments, impact analysis**, and validation of scope changes in public-sector systems.
- Maintained version control for test artifacts and requirement documents to ensure alignment with compliance standards.

#### Additional Contributions:

- Facilitated walkthroughs and review sessions with SMEs and QA teams.
- Supported requirement elicitation, documentation, and validation activities.
- Contributed to process improvements and QA best practices across releases.

### Software Automation

#### Engineer / SDET

Client: Credit safe Technologies

Location: Hyderabad, India

Duration: Nov 2019 – Nov 2022

## Responsibilities:

- Supported **Agile delivery teams** by participating in sprint ceremonies, providing regular test status updates, and ensuring timely quality feedback.
- Analyzed **SRS, functional, and technical design documents** to develop **test plans, test suites, and test cases** aligned with business and technical requirements.
- Designed, developed, and maintained **scalable automation frameworks** using **Selenium WebDriver, Python, PyTest, Robot Framework, Cypress, and Java**.
- Automated **UI and API test cases** covering functional, integration, regression, and end-to-end scenarios across multiple applications.
- Implemented **Page Object Model (POM), Data-Driven, Keyword-Driven, and Hybrid frameworks** to improve maintainability and reusability.
- Created **custom Python keywords in Robot Framework** to support complex automation workflows and reusable test components.
- Developed **Cypress automation frameworks from scratch** for two projects, enabling modern JavaScript-based automation.
- Performed **cross-browser and cross-platform testing** using Selenium and Cypress, including execution on **Sauce Labs** with parallel test execution.
- Conducted **API and web service testing** using **SOAP UI**, validating request/response payloads and backend integrations.
- Integrated automated test suites into **CI/CD pipelines using Jenkins**, enabling continuous testing and faster feedback cycles.
- Executed **database testing and backend validation** using complex **SQL queries** across MySQL and Oracle databases.
- Maintained and optimized **BDD test suites** using **Cucumber**, ensuring readability and collaboration with business stakeholders.
- Logged, tracked, and managed defects using **JIRA and Quality Center**, participating in defect triage and review meetings.
- Performed **manual testing** (functional, regression, integration, acceptance, compatibility, and localization) prior to automation to ensure baseline stability.
- Conducted **performance testing** using **Locust**, identifying bottlenecks and scalability issues.
- Collaborated closely with developers, business analysts, and project managers to ensure quality alignment across releases.

## Additional Contributions:

- Prepared and presented test cases for peer and business review.
- Coordinated UAT testing and supported multiple environments (DEV, TEST, UAT, PROD).
- Suggested test process improvements based on defect trends and execution metrics.
- Managed release-level QA activities and reported quality metrics to stakeholders.

## Certifications & Awards

- **Winner – 1st Place**, Internal Hackathon, **Credit safe Technologies**, recognized for innovative problem-solving and technical excellence.
- **LinkedIn Learning Certification** – GitHub & Coding with GitHub.
- **Data Camp Certification** – Working with AI Models.
- **Data Camp Certification** – Understanding Prompt Engineering, ChatGPT, and AI Testing.
- **Hacker Rank Certifications** – Java, CSS, and Problem Solving.
- **Data Camp Certification** – Python Programming.
- **IBM Learning Certification** – HIPAA Compliance and Data Privacy.