

Kirti Ranjan Satapathy

Principal SDET | QA Automation Architect | AI-Driven Quality Engineering

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Career Summary

- Principal SDET and QA Automation Architect with 11+ years of experience in Quality Engineering, test automation architecture, and enterprise QA transformation across multiple domains.
- Experienced in Quality Engineering strategy, Test CoE initiatives, automation governance, technical mentoring, and driving scalable testing practices across teams.
- Expert in designing scalable UI and API automation frameworks using Playwright, TypeScript, and Selenium, integrated with CI/CD pipelines and modern DevOps practices.
- Experienced in AI-driven testing and agentic orchestration, including autonomous test lifecycle workflows, MCP-based automation, RAG solutions, and LLM evaluation frameworks.
- Skilled in performance engineering using k6, cloud-native application testing, microservices validation, and containerized environments using Docker and Kubernetes.
- Proven track record of reducing regression testing effort by 70%, migrating 300+ automation scripts in 20 days, and improving release efficiency by 35%.

Tools & Technologies

- Automation Tools: Playwright, Selenium, Cypress, Appium
- Programming Languages: TypeScript, JavaScript, Java, C#, Python
- API & Backend Testing: REST API, Postman, Swagger, SQL, Microservices Testing
- Performance Testing: k6 (Grafana), Load Testing, Performance Test Automation
- CI/CD & DevOps: Azure DevOps, GitHub Actions, Docker, Kubernetes
- Databases & Data Validation: SQL, MongoDB, InfluxDB
- Testing Practices: BDD, TDD, Shift-Left Testing, Test Planning, Risk-Based Testing, Regression Testing, Test Strategy & Planning
- AI & Agentic Testing: MCP, Agentic Orchestration, RAG, LangChain, LLM Evaluation (Evals), AI-Assisted Test Automation, Claude Skills
- Additional Skills: PowerBI, Blockchain, UiPath, VB Script, Shell Script, AutoIT

- Domain Experience: Industrial IoT (IIoT), Digital Twin, Finance/Investment, Airlines, Sports Tech

Key Achievements

- Reduced regression testing effort by 70% through Playwright automation frameworks.
- Migrated 300+ automation scripts from Protractor to Playwright in 20 days.
- Improved release cycles by 35% via CI/CD pipeline optimization.
- Designed and implemented 4+ enterprise-grade automation frameworks from scratch across multiple domains.
- Built AI-powered MCP server ([API Tester MCP](#)) reducing API and load testing time from hours to minutes.

Work Experience

Creative Synergies Group (Apr 2026 – Present)

- Designed an end-to-end agentic orchestration workflow spanning the test lifecycle, from requirement analysis and test generation to test execution and failure triage.
- Architected a scalable, AI-powered Playwright and TypeScript automation framework to support maintainable, reusable, and efficient test automation.
- Designed a reusable, low-code k6 performance testing framework to simplify performance test scripting and accelerate test creation across applications.
- Contributed to establishing the Test Center of Excellence (Test CoE), helping define reusable Quality Engineering practices, automation standards, and governance.
- Mentored junior test engineers on automation framework design, implementation practices, and quality engineering standards.
- Led QA strategy and quality engineering initiatives spanning test planning, automation architecture, defect lifecycle management, and CI/CD integration using Azure DevOps and GitHub Actions.

Wissen Technology (Client: Morgan Stanley) (Dec 2025 – Mar 2026)

- Architected and implemented a scalable test automation framework using Playwright and TypeScript for Fund Services applications, improving test coverage, execution speed, and maintainability.
- Designed a low-code automation framework to accelerate onboarding of new applications, reducing manual scripting effort and time-to-automation.
- Implemented AI-assisted, spec-driven test automation leveraging LLM-based capabilities (Claude Skills), enabling faster test creation and standardized onboarding.
- Integrated UI and API testing to validate application workflows and microservices interactions across the Fund Services landscape.

Kongsberg Digital, Bengaluru (Nov 2021 – Dec 2025)

- Designed scalable, enterprise-grade automation frameworks using Playwright & TypeScript, following modern Automation Framework Design Patterns, reducing regression effort by 70% and improving maintainability and scalability.
- Automated testing of containerized microservices applications deployed on Docker and Kubernetes, validating systems on Linux-based industrial IoT devices.
- Migrated 300+ automation scripts from Protractor to Playwright in 20 days, significantly improving execution speed and maintainability.
- Validated live time-series sensor data using InfluxDB for high-volume Edge IoT systems.
- Performed REST API testing using Postman, ensuring robust validation of microservices architecture.
- Mentored QA engineers in adopting modern automation frameworks, improving team productivity and code quality.
- Implemented Azure DevOps CI/CD pipelines, enabling continuous testing and faster release cycles, improving release efficiency by 35%.
- Acted as Scrum Master, facilitating Agile ceremonies and improving team delivery efficiency.
- Developed a RAG-based AI assistant leveraging LLMs, later integrated into core product offerings.
- Designed and integrated an AI Evals framework into CI/CD pipelines to validate LLM outputs during releases.
- Developed an AI-powered MCP server for intelligent API and load testing, reducing execution time from hours to minutes through natural language-driven test execution.
- Championed AI-driven testing and intelligent automation, aligning QA strategy with emerging technologies.

Mindtree Ltd, Bengaluru (Mar 2015 – Nov 2021)

- Built and enhanced Selenium-based automation frameworks (Java & C#) for enterprise clients including Southwest Airlines and Aberdeen Investments.
- Performed end-to-end testing (functional, regression, integration, API, and data testing) across multiple large-scale applications.
- Executed SQL-based data validation and backend testing to ensure data integrity across systems.
- Performed API testing using Postman & Swagger.
- Led a 12-member QA team (Automation + Functional), driving delivery excellence and improving team performance.
- Contributed to Test Automation CoE, defining Quality Engineering practices, Test Strategy, and governance models across projects.
- Designed and implemented Power BI dashboards for real-time project health and reporting.
- Collaborated closely with stakeholders for requirement analysis, test strategy, and QA planning.

- Strengthened client engagement and delivery alignment, ensuring high customer satisfaction.

Certifications

- Microsoft Certified: Azure AI Fundamentals (AI-900)
- Claude Academy Certifications (All) - Anthropic
- Advanced Playwright – Test Automation University
- Cypress with TypeScript – Test Automation University
- Performance Testing with k6 – Udemy
- API Testing Learning Path Certificate - Postman
- Certified Blockchain Developer & Expert – Blockchain Council

Recognition & Community Engagement

- Speaker at AgilityToday & ATAGTR conferences and The Test Tribe Meetups.
- Member of BrowserStack Champions Community and other QA forums.
- Presented learning sessions at my current and previous organizations.
- Received Spotlight Award for excellent delivery at Kongsberg.
- Awarded 'Outstanding Performer of the Year' 4 times consecutively at Mindtree.
- Received recognition as part of Mindtree Pillar's club (Top 5% employees).

Education

- Bachelor of Technology, Biju Patnaik University of Technology, Odisha (2010-2014) - CGPA: 8.05
- 10th & 12th, Jawahar Navodaya Vidyalaya, Kendrapara, Odisha (2008, 2010)