Osanda Nimalarathna

Lead Software Engineer | Test Automation, Performance Testing and AI-Driven Quality Engineering

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SUMMARY

Lead Software Engineer with 10+ years of experience in test automation, performance testing and quality engineering for the Singapore Government and global publishing and edtech leaders. Leads quality for TradeNet, Singapore's National Single Window, at GovTech. Led QE across 6 Singapore Government digital services, architected UI, API and mobile automation frameworks, and drives AI-assisted engineering with Claude, GitHub Copilot and Gemini. Ranked #1 on Test Automation University, founder of the MaxSoft open-source testing tools, and trained the QE team at every company joined.

SKILLS

AI and Intelligent Automation: Claude, GitHub Copilot, Cursor, Gemini, AI-Driven Software Development, Prompt Engineering, Generative AI, Agentic AI

Test Automation: Playwright, Selenium, Appium, Cucumber, Gauge, Robot Framework, TestNG, Rest Assured, BDD, API Testing, Mobile Testing

Performance and Quality: k6, Gatling, JMeter, Performance Testing, Load Testing, Visual Testing, Chaos Engineering, Test Strategy, Quality Governance, ISTQB

Languages and Frameworks: Java, Kotlin, TypeScript, JavaScript, Python, C#, Spring Boot, Node.js

CI/CD and Cloud: GitLab CI, Jenkins, Docker, Kubernetes, AWS, Azure, Firebase, Git

Tools and Platforms: Jira, Xray, Zephyr, TestRail, Confluence, Automation Anywhere (RPA), ACCELQ

Leadership and Ways of Working: Team Leadership, Mentoring, Code Review, Agile, SAFe

WORK EXPERIENCE

Lead Software Engineer
02/2025 - Present

GovTech Singapore (via Virtusa)
Punggol Digital District, Singapore

TradeNet: Singapore's National Single Window, the platform the entire trade and logistics community uses to meet import, export and transhipment requirements across multiple regulatory agencies.

- Protect a national platform by leading TradeNet's test automation across UI, API and visual suites with Playwright, Cucumber, Spring Boot and Kotlin.
- Prove TradeNet stays fast and reliable at peak trade volumes by planning, scripting and running k6 performance and load tests.
- Govern quality end to end: define test strategy, standards, quality gates and release-readiness criteria, turning "is it ready?" into a clear, shared decision.
- Accelerate test design, script authoring and failure analysis by bringing AI-assisted engineering with Claude, GitHub Copilot and Gemini into the QE workflow.
- Keep releases on schedule by owning test execution and defect triage, so issues are resolved fast.
- Raise the team's engineering bar through hands-on code reviews and clear, actionable feedback on automation code.
- Make delivery plans realistic by refining requirements, breaking down user stories and estimating effort with the product team.

Tools: Playwright, Cucumber, k6, Spring Boot, Kotlin, Gradle, Claude, GitHub Copilot, Gemini, SHIP-HATS, GitLab CI, Jira, IntelliJ IDEA, VS Code

Lead Automation Engineer
08/2022 - 02/2025

Activate Interactive
Paya Lebar, Singapore

Led quality engineering for 5 Singapore Government digital services:

- **SGSecure 2.0:** national public-safety programme with a citizen mobile app for alerts and incident reporting and an admin portal for authorities.
- **SGWorkPass:** Ministry of Manpower app for carrying and verifying digital work passes.
- **SHARE:** Self-Help And Rehabilitation E-Application for supervisees, with learning resources, job recommendations and progress tracking.
- **MPA:** Maritime and Port Authority of Singapore platform for port information, shipping services and real-time maritime updates.
- **CRISP:** Cloud Resource and Infrastructure Services Platform that accelerates government application migration to GCC 2.0 with Infrastructure as Code.
- Owned end-to-end quality across all 5 services, from test strategy and planning through execution and defect management.
- Gave teams fast feedback on every change by building API automation with Playwright and TypeScript, and iOS and Android automation with Appium on real-device clouds (pCloudy).
- Uncovered performance bottlenecks before release with Gatling and JMeter load tests, guiding scalability improvements.
- Set the QA standards and practices that project teams adopted across the portfolio.
- Multiplied the team's capability by training QE engineers in modern automation techniques.
- Kept releases predictable through test execution, defect tracking in Jira with Xray and Zephyr, and code reviews.

Tools: Playwright, TypeScript, Appium, Selenium, Rest Assured, Robot Framework, Java, TestNG, Gatling, JMeter, pCloudy, Android Studio, Xcode, SHIP-HATS, GitLab, Bitbucket, Maven, Node.js, Jira, Xray, Zephyr

Technical Specialist
07/2022 - 08/2022

Wiley Global Technology *Nawala, Sri Lanka*

Author Services: part of the Wiley Publishing Platform, a one-stop shop that helps research authors worldwide publish articles and access Wiley products and services. Promoted twice in 3 years.

- Led automation and QE processes for Author Services, Wiley's research-publishing platform used by authors worldwide.
- Upskilled the QE team in advanced web and API automation techniques, raising the whole team's delivery capability.
- Set the quality bar for the automation suite through code reviews and clear, shared coding standards.

Associate Technical Specialist
07/2021 - 06/2022

Wiley Global Technology *Nawala, Sri Lanka*

- Simplified day-to-day testing for the whole team by building plugins that extend the in-house Java automation frameworks.
- Delivered faster, more reliable CI feedback by optimising the automation suite in Jenkins pipelines.
- Made QE knowledge scale beyond any one person by documenting processes, frameworks and tooling in Confluence.

Senior Software Quality Engineer
06/2019 - 06/2021

Wiley Global Technology *Nawala, Sri Lanka*

- Kept Author Services releases safe with UI and API regression suites built on Teasy, Selenium, Rest Assured and TestNG, running in continuous integration.
- Turned user stories into test matrices and scenarios so coverage was planned, not accidental; contributed to story breakdown and estimation.
- Trained QE team members on web and API test automation and on API development with Node.js and Express, and contributed to the team's JavaScript initiatives.

Tools (Wiley): Java, Spring Boot, React, JavaScript, Node.js, Express, Teasy, Selenium, Rest Assured, TestNG, Allure, Jenkins, Cuanto, Docker, Dynatrace, AWS, TestRail, Jira, Confluence, GitHub

Senior Software Quality Engineer
11/2018 - 05/2019

CingleVue International *Kollupitiya, Sri Lanka*

Virtuoso: an e-learning platform that improves teaching and learning outcomes, with research into speech recognition as a new way to interact with the software.

- Gave the Virtuoso platform repeatable regression coverage by designing and maintaining automated web tests with Robot Framework and Python.
- Gave the team feedback on every change by running the automated suites in continuous integration with Jenkins.
- Helped the QE team adopt Robot Framework effectively through hands-on training sessions.
- Held a high quality bar by owning test cases, execution and defect tracking; contributed to story breakdown and estimation.
- Documented QE processes in Confluence and supported customers after release when needed.

Tools: Robot Framework, Python, Protractor, JavaScript, TypeScript, Git, Jenkins, Docker, Kubernetes, Azure

Software Quality Engineer
08/2017 - 10/2018

Pearson Lanka *Dematagoda, Sri Lanka*

Pearson Prep: a study app that auto-creates flashcards from students' notes, offers expert decks aligned to Pearson textbooks and shows real-time progress.

- Removed duplicate test effort across platforms with a behaviour-driven Gauge, Appium and Java mobile framework: one codebase for both Android and iOS.
- Created IntelliAPI, a codeless API testing framework, and saw the Pearson Mobile team adopt it for API automation.
- Gave developers feedback on every build by building Jenkins CI pipelines for the mobile and API test suites.
- Went beyond functional testing with mobile and API performance testing in JMeter and accessibility testing.
- Trained QE team members on behaviour-driven automation for web, mobile and API, and guided the team's automation strategy.
- Kept product owners confident with regular demos, suggested design and functionality improvements, and documented QE processes in Confluence.

Tools: Java, Gauge, Appium, Selenium, Rest Assured, Android SDK, iOS, Maven, JMeter, Jenkins, Git, HP ALM, Confluence

Associate Software Quality Engineer
01/2017 - 07/2017

Mitra Innovation *Moratuwa, Sri Lanka*

Promoted from intern to a full-time role in 5 months. Client products: Blue Squirrel (personal finance), Modern Hardware (sales automation), Kraydel (connected care for the elderly) and Ramsay Health Care (communication platform).

- Automated regression across APIs, Android, iOS and client websites by building behaviour-driven frameworks with Gauge, Selenium, Rest Assured, Appium and Java.
- Gave stakeholders a clear view of quality with test strategies, plans and regression reports based on functional and technical specifications.
- Assessed client site performance with JMeter and kept QA environments ready by managing deployments and build artifacts with TeamCity.
- Guided teammates on automation practices; designed manual test cases in Zephyr, owned defect tracking and contributed to code reviews.

Intern Software Engineer
08/2016 - 12/2016

Mitra Innovation *Moratuwa, Sri Lanka*

- Developed a web-based system for an Australian hospital with C#, ASP.NET, WebAPI, MVC, Angular and Azure, meeting and exceeding the client brief.

- Delivered an ActiveCampaign marketing-automation proof of concept, integrated SendGrid for cloud email delivery, and built event-driven notifications and an admin activity log.
- Added web test automation with Gauge and Selenium to improve regression return on investment for the QE team.

Tools (Mitra): Java, Gauge, Selenium, Appium, Rest Assured, JMeter, Maven, Jenkins, TeamCity, Zephyr, Jira, Bitbucket, C#, ASP.NET, .NET Core, Angular, React Native, MySQL, Azure

EDUCATION

BSc (Special) in Computer Science and Technology — 2013 - 2017

Uva Wellassa University — *Badulla, Sri Lanka*

Four-year specialist degree in software engineering, algorithms, networking and data systems. Research publications: MySight (University of Kelaniya repository, 2016) and eye4U (IRSUWU 2017).

PROJECTS AND PUBLICATIONS

- **MaxSoft IntelliAPI** (2017): Codeless API and database testing framework adopted by the Pearson Mobile team; anyone on the team automates API tests in plain business language, with parallel runs and HTML reports.
  Tools & Technologies: Java, Gauge, Rest Assured, Apache POI, JUnit, Maven | GitHub | Publication
- **MaxSoft API Health Checker** (2020): Real-time dashboard of backend service availability across all environments, faster than Dynatrace's 5-minute minimum interval. 23 stars and 21 forks.
  Tools & Technologies: Node.js, Express, JavaScript, HTML, CSS | GitHub | Publication
- **MaxSoft TestNG Test Results Analyzer** (2021): Groups failed and skipped TestNG tests by root cause in Excel charts and an Extent HTML report, so teams fix the biggest issue first.
  Tools & Technologies: Java, TestNG, Apache POI, Extent Reports, Selenium, Maven | GitHub | Publication
- **MaxSoft Extent Reporter** (2020): Drop-in plugin that generates rich Extent HTML reports with failure screenshots for any TestNG framework, with zero reporting code; available via JitPack.
  Tools & Technologies: Java, TestNG, Extent Reports, Selenium, Maven | GitHub | Publication
- **MaxSoft WebDriver Manager** (2020): Launches any major browser on Windows, macOS or Linux in one line of code, with zero driver setup.
  Tools & Technologies: Java, Selenium, WebDriverManager, JUnit, Maven | GitHub | Publication
- **MaxSoft GReporter** (2018): Gauge plugin that emails stakeholders a visual test summary with charts after every run, with separate recipient lists per environment, ending manual status reports.
  Tools & Technologies: Java, Gauge, JFreeChart, XChart, JavaMail, Maven | GitHub | Publication
- **MaxSoft WebBot** (2018): Codeless web UI automation in plain business language with parallel execution and live reports, so non-technical team members can write tests.
  Tools & Technologies: Java, Gauge, Selenium, WebDriverManager, Apache POI, Maven | GitHub
- **Test Automation Master** (since 2020): Medium publication of step-by-step tutorials on web, mobile and API automation, DevOps and engineering practices, with 275+ followers. Publication
- **eye4U: An Effective Mobile Based Solution for the Visually Impaired** (2017): Research publication presented at IRSUWU 2017, the International Research Symposium of Uva Wellassa University.
- **MySight: A New Vision for the Blind** (2016): Final-year research; an Android app that reads printed text aloud for visually impaired users.
  Tools & Technologies: Java, Android, C++, OpenCV, OCR, Text-to-Speech | GitHub | Publication
- **Also:** SoapUI to Gauge Plugin, Mock API Server, Text Extractor, and open-source starter kits for Playwright + TypeScript, Appium, Rest Assured and Kotlin + Selenium, among 150+ public GitHub repositories.

CERTIFICATIONS

- ISTQB Certified Tester, Foundation Level (CTFL)
- Certified SAFe 5 Agile Software Engineer
- Certified SAFe 5 Agilist
- Gremlin Certified Chaos Engineering Practitioner
- Certified ACCELQ Automation Expert
- Certified ACCELQ Automation Engineer
- Certified RPA Solution Architect (Automation Anywhere)
- Certified Bot Developer: Automation 360
- Certified Bot Developer: Enterprise 11
- Certified IQ Bot Developer
- Certified Secure Bot Developer
- HackerRank Java (Basic) Certificate
- MongoDB Basics
- MongoDB Cluster Administration

AWARDS

- Ranked #1 on Test Automation University
- Ranked #1 for Java on HackerRank
- HackerRank Gold Badge: Problem Solving
- HackerRank Gold Badge: JavaScript
- 1st Runner-up, Deft Coders Hackathon 2015