Amit Kurmoli

SDET / QA Automation Engineer

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SUMMARY

SDET / QA Automation Engineer with 5+ years of hands-on experience designing and delivering test automation across web, desktop, and mobile applications. Strong in Python and Java with practical depth in **Playwright, Selenium, Appium, pytest, REST and GraphQL API testing, k6 performance testing, and chaos engineering with Toxiproxy**. Built reusable, CI-integrated test frameworks from scratch and led QA operations on production projects. Recent M.S. in Information Science (Machine Learning) — bringing modern engineering sensibilities (clean architecture, observability, plugin-based design) to quality engineering.

TECHNICAL SKILLS

Test Automation: Python, pytest, Playwright, Selenium WebDriver, Appium, Winium, Java; Page Object Model, fixture design, parallel execution, flaky-test handling, framework design from scratch

API Testing: REST and GraphQL; httpx, requests, REST Assured; contract testing patterns, authentication flows, error-as-data vs transport-error handling

Performance & Chaos: k6 (TypeScript), load and stress testing, SLO thresholds; Toxiproxy for network fault injection (latency, timeouts, connection resets)

CI / CD & Infrastructure: GitHub Actions, Jenkins, Docker, Docker Compose, pipeline design and quality gates, Linux / macOS / Windows; AWS familiarity (EC2, S3, IAM)

Backend, Data & Reporting: FastAPI, SQL, SQLite, Pydantic; database validation in test suites; Allure and HTML test reporting; Git, agile delivery

Cross-Platform Testing: iOS and Android device matrix, React Native context, cross-browser (Chrome, Firefox, Safari), Windows desktop UI automation

Machine Learning (M.S. coursework): Python, TensorFlow, Transformer architectures, data pipelines, MediaPipe

PROFESSIONAL EXPERIENCE

Quality Engineer — Pepper Square Bangalore, India | 2022 – 2024

Led testing operations on the agency's first development project

- Established the QA function from scratch as Pepper Square (a design-focused agency) expanded into software development — defined testing standards, processes, and a reusable Java/Selenium automation framework covering websites, web applications, and mobile applications.
- Right-sized the framework deliberately: scaled and integrated with CI so developers received fast feedback on commits, with unit and end-to-end suites cleanly separated; kept engineering effort balanced against meaningful test coverage rather than over-investing in tooling.
- Led QA on the ground-up revamp of a React Native mobile application (iOS and Android) for a fitness organization — covering manual functional testing, Appium UI automation, API testing with REST Assured, and SQL-based database validation across the UI, service, and data layers.
- Performed cross-browser UI testing across Chrome, Firefox, and Safari, and cross-platform testing on a device matrix of roughly 8 iOS and Android phones plus tablets.
- Contributed beyond QA: collaborated with the design team on user-flow mapping, worked on features including in-app checkout and iOS/Android health-monitor integration, and helped design the backend content management system.
- Also delivered short-term UI testing for the mobile web revamp of a major national restaurant brand.

Member Technical Staff — Quality, Sharp Japan-based product company | 2019 – 2022

QA across Sharp's document-solutions products — web, Windows desktop, and mobile

- COCORO OFFICE Shared Folder (cloud storage & document-sharing service): manual functional testing of file-sharing workflows — upload, download, permission enforcement, secure share links with password /

download-count / expiry controls — plus Java + Selenium WebDriver web-portal automation inside an established enterprise test framework.
- Sharpdesk Mobile (cross-platform mobile printing & scanning app): manual functional testing of print, scan, and file-sharing workflows across both iOS and Android, and Java + Appium UI automation covering variation in devices, screen sizes, and OS versions.
- Sharpdesk Desktop (Windows document-management application): manual functional testing across document, scanning, OCR, and annotation workflows, and Java + Winium UI regression automation (Selenium-style WebDriver tool for Windows desktop applications).
- Logged defects with clear reproduction steps, tracked them to resolution, and worked closely with senior engineers to verify fixes.

INDEPENDENT & RESEARCH PROJECTS

Anton — Test Automation Framework Independent project | 2025 – present

Four-engine test framework with one shared interface

- Designed and built a test automation framework with four engines — API, UI, performance, and chaos — against Vendure, an open-source GraphQL e-commerce platform. Every engine implements the same three-method interface (prepare, execute, collect artifacts), so orchestration, fixtures, and reporting are shared across all test types.
- API engine: pytest with a thin GraphQL client over requests; queries, mutations, authentication flows, and error-handling patterns. UI engine: Playwright with Page Object Model. Performance: k6 wrapped as a subprocess with SLO thresholds. Chaos: Toxiproxy for real network fault injection (latency, timeouts).
- Pytest plugin writes every run to SQLite; FastAPI + React dashboard reads from that database; GitHub Actions runs all 44 tests on every push with downloadable HTML reports.
- Deliberate fixture scoping (session-scoped shared clients, function-scoped customers) and zero hardcoded IDs — checkout discovers shipping and payment methods at runtime, so the suite works against any Vendure instance.
- Stack: Python, pytest, Playwright, GraphQL, k6, Toxiproxy, FastAPI, React, SQLite, Docker Compose, GitHub Actions.

ASL-TRM — Transformer Model for ASL Gesture Recognition M.S. Capstone | 2025 – 2026

Three-person team — owned the data pipeline; contributed to model development

- Built the end-to-end data pipeline for a lightweight Transformer-based ASL gesture recognition system: dataset preparation (WLASL, Microsoft ASL-Citizen), MediaPipe Holistic feature extraction, and data ingestion feeding the model for training and evaluation.
- Assisted in developing TRM-Micro, which adapts recursive-reasoning principles from recent Transformer research to the spatio-temporal domain of sign language.
- TRM-Micro v3 matched or exceeded the ST-GCN baseline on ASL-Citizen (Top-1: 61.46% vs 59.52%) at roughly one-fifth the parameter count (~622K vs ~3.1M).
- Stack: Python, TensorFlow, Transformer architectures, MediaPipe Holistic, Streamlit. Repository private pending publication.

EDUCATION

M.S. Information Science, University of Arizona 2024 – 2026

Machine Learning emphasis

M.Tech Power Electronics 2016 – 2018

B.E. Electronics & Electrical Engineering 2012 – 2016

PORTFOLIO

Portfolio site and project deep-dives: Ak79p.github.io • Anton repo: github.com/Ak79p/anton