

# ELYER GREGORIO MALDONADO

SENIOR QA TECH LEAD | TEST AUTOMATION ARCHITECT

7+

YEARS EXP.

55-60%

DEFECT REDUCTION

92%

AUTO. COVERAGE

9

TOOLS BUILT

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## PROFESSIONAL SUMMARY

Senior QA Tech Lead and Test Automation Architect with 7+ years leading Quality Assurance teams and designing end-to-end quality ecosystems. Specialized in **Shift-Left Testing**, **AI/LLM Testing**, **Performance Testing**, and **Security Testing**.

Creator of the **QASL Ecosystem**: a suite of 9 integrated tools including QASL Framework (E2E, API, Performance, Security), SIGMA Analyzer (AI-powered test case generation), INGRID (AI/LLM Testing), SIPQ-SENTINEL (environment monitoring), QASL-API-SENTINEL (24/7 API monitoring), QASL-SENTINEL-UNIFIED (AI-powered Command Center for deployment change detection), QASL-MOBILE (mobile testing with AI), and QASL-Manual (QA Manual team platform).

Methodologies aligned with **ISTQB v4.0**, **IEEE 829/830**, and **ISO/IEC 25010**. Proven track record reducing critical defects, optimizing testing cycles, and building enterprise-level reusable frameworks.

### Key Achievements:

- **1,300+ test cases** generated from User Stories before development
- **35% reduction** in defect detection time (Shift-Left approach)
- **55-60% reduction** in critical production defects
- **92% automated coverage** for regression, smoke, and sanity
- **42% increase** in testing efficiency

## CORE COMPETENCIES

### E2E Test Automation

Playwright, TypeScript, Python, Pytest, Page Object Model, 11-level selector system, BDD/Cucumber

### AI / LLM Testing

Claude API, Garak (NVIDIA NeMo), LLM-as-Judge, Prompt Engineering, RAG, ML Anomaly Detection, relevance/accuracy/coherence/hallucination evaluation

### API Testing

Postman, Newman, REST, SOAP, GraphQL, Contract Testing, OAuth/JWT, Swagger/OpenAPI, schema validation

### Programming

TypeScript, JavaScript (Node.js), Python, PowerShell, Bash, SQL (PostgreSQL, SQL Server)

### QA Management

### Performance & Observability

K6, JMeter, Grafana, InfluxDB, Prometheus, PromQL, Pushgateway, Loki, real-time metrics, executive dashboards

### Security Testing

OWASP ZAP, Garak (LLM Vulnerability Scanner), OWASP LLM Top 10 2025, Prompt Injection Testing, Jailbreak Detection, PII Exposure Testing, penetration testing, security hardening

### Mobile Testing

Maestro, Android Emulators, Claude Vision for UX/UI analysis, Device Streaming via WebSocket

### CI/CD & DevOps

Docker, Docker Compose, Git/GitHub, GitLab CI, GitHub Actions, Jenkins, pipeline automation

### Monitoring & Alerts

JIRA, Xray, TestRail, Confluence, Swagger/OpenAPI, Allure Reports, Risk-Based Testing, Technical Writing

Prometheus, Grafana, InfluxDB, Pushgateway, 24/7 Health Checks, ML for anomalies, DEFCON system, automated email reports

### Standards & Methodology

ISTQB v4.0 Foundation, IEEE 829/830, ISO/IEC 25010, Agile/Scrum, Shift-Left Testing, TDD, BDD, DevOps Practices

### Compliance & Reporting

SOC2, ISO 27001, PCI-DSS, HIPAA, OWASP Top 10, GDPR, PDFKit, Slack/Teams Integration

## **PROFESSIONAL EXPERIENCE**

### **QA Tech Lead – EPIDATA**

Mar 2025 – Present · Buenos Aires (Hybrid)

#### Government Sector (AGIP, SIPQ, ASI, OCA)

Technical QA lead for multiple government projects, defining standards, automation architectures, and Shift-Left Testing strategies.

- Designed and built the **QASL Ecosystem** with 9 integrated tools: QASL Framework, SIGMA Analyzer, INGRID, SIPQ-SENTINEL, QASL-API-SENTINEL, QASL-SENTINEL-UNIFIED, QASL-MOBILE, QASL-Manual, and QASL-Monitor.
- Developed **SIGMA Analyzer** for static User Story analysis with Claude API, generating **1,300+ test cases** before development.
- Defined **6-phase Shift-Left methodology** aligned with ISTQB v4.0 and IEEE 829/830, applicable from requirement analysis to production.
- Implemented recording system with **11 selector levels** for robust and maintainable automation in dynamic environments.
- Achieved **35% reduction** in defect detection time by advancing key testing to early SDLC phases.
- Created **executive dashboards** in Grafana with real-time metrics for technical and business stakeholders.
- Mentored and coached 5+ junior/mid-level QA professionals in automation, test design, and AI Testing.

**Tech Stack:** Playwright, TypeScript, Python, K6, OWASP ZAP, Newman, Docker, Grafana, InfluxDB, Loki, Prometheus, Claude API, Garak, PDFKit, JIRA, Xray, SQL Server

### **QA Automation Engineer – UPEX**

Aug 2020 – Dec 2024 · Buenos Aires (Remote)

#### E-commerce · Fintech · Healthtech

Automation engineer for multi-sector solutions focused on reliability, coverage, and delivery speed.

- Reduced regression execution time by **30%** through strategic automation with Playwright/TypeScript.
- Increased automated test coverage by **40%** (regression, smoke, sanity).
- Reduced critical production defects by **55%**.
- Designed and implemented reusable **Page Object Model** frameworks prioritizing maintainability.
- Configured load and stress tests with **JMeter and K6** to validate performance and scalability.
- Integrated tests into **CI/CD pipelines** with GitHub Actions, reducing feedback time.
- Implemented basic security testing with **OWASP ZAP** on critical flows (authentication, payments).

**Sectors:** E-commerce, Fintech (ISO 8583, PCI-DSS), Healthtech (HIPAA)

### **Project Manager / QA Lead – STOP MEDICAL ESTENDELY, C.A.**

Apr 2013 – May 2020 · Caracas (On-site)

#### Healthcare Sector

Led digital transformation projects in healthcare, implementing HIS (Hospital Information System) across medical facilities.

- Successfully implemented HIS in **5 medical centers** with zero critical production incidents.
- Reduced data migration errors by **65%** through structured validations and cross-system testing.
- Coordinated multidisciplinary teams of up to **8 professionals** (development, QA, infrastructure, support).
- Ensured **HIPAA** compliance and best practices for sensitive information handling.
- Managed migration testing between legacy systems and modern HIS.

## **QASL ECOSYSTEM – 9 INTEGRATED TOOLS**

## QASL Framework – Quality Assurance Shift-Left CORE

Enterprise unified QA automation and observability platform designed to implement Shift-Left Testing at organizational scale.

- Integration of E2E (Playwright), API (Newman), Performance (K6), and Security (OWASP ZAP)
- End-to-end observability with Grafana, InfluxDB, and Loki for centralized metrics
- Complete traceability: **Epic → US → Test Suite → Test Case**
- Automated pipelines with Allure reports and executive dashboards

**Stack:** Playwright, Newman, K6, OWASP ZAP, Grafana, InfluxDB, Loki, Docker, TypeScript

## SIGMA Analyzer AI

Static User Story analysis engine with Claude API for automated test case generation.

- Complete US document analysis with Business Rules identification
- Generation of 2 scenarios per BR (Positive + Negative)
- CSV output compatible with QASL-Manual
- Over **1,300 test cases** generated before development

**Stack:** Python, Claude API, CSV Processing

## INGRID – AI Testing Framework SECURITY

Professional framework for automated testing of chatbots and LLM systems using LLM-as-Judge methodology.

- Based on **OWASP LLM Top 10 2025** for AI system security
- Vulnerability detection: prompt injection, data leakage, jailbreaks
- Multi-dimensional evaluation: relevance, accuracy, coherence, completeness, hallucination score
- Integration with Grafana and Prometheus for real-time metrics

**Stack:** Playwright, TypeScript, Claude API, Grafana, Prometheus, Docker

## SIPQ-SENTINEL – Environment Monitor MONITOR

Autonomous environment monitoring system with predictive AI to detect issues before running regressions.

- Automated validation of Login, Menus, Navigation, and critical functionalities
- Automatic screenshots with Claude AI analysis
- Predictive reports: environment READY or NOT READY for testing
- Slack/Email integration for real-time alerts

**Stack:** Playwright, TypeScript, Claude API, Node.js

## QASL-API-SENTINEL – API Monitor 24/7 MONITOR

Intelligent API monitoring center with continuous health checks, Machine Learning for anomalies, and compliance reporting.

- 24/7 monitoring with Prometheus metrics and Grafana dashboards
- Machine Learning for anomaly detection and failure prediction
- Automated email reports (every 5 hours, daily, weekly)
- Security scanning and compliance reports (SOC2, ISO27001)
- Complete CLI with NASA-style terminal dashboard

**Stack:** Node.js, Prometheus, Grafana, Docker, Claude API, Machine Learning

## QASL-SENTINEL-UNIFIED – Command Center AI + MONITOR

Unified monitoring Command Center for Test and Staging environments. Detects changes in Frontend (DOM) and Backend (API) deployments with integrated artificial intelligence.

- Dual monitoring: **Backend APIs** (Prometheus) + **Frontend DOM** (Playwright + InfluxDB)
- **INGRID** chatbot with Claude AI integrated in Grafana for natural language queries
- Professional **PDF report generation** and on-demand automated email delivery
- LLM red-teaming with **Garak (NVIDIA NeMo)**: prompt injection, jailbreak, data leakage, toxicity, PII exposure, hallucination detection

- Grafana dashboard with **55 panels in 8 sections + DEFCON** classification system (DC-1 to DC-5)
- Compliance: SOC2, ISO 27001, PCI-DSS, HIPAA + Machine Learning for anomaly detection

**Stack:** Node.js, TypeScript, Playwright, Claude AI, Garak, Grafana, Prometheus, InfluxDB, Docker, OWASP ZAP, PDFKit

### QASL-MOBILE – Mobile Testing Framework MOBILE

Mobile testing framework for Android with Maestro, UX/UI analysis with Claude Vision, and device streaming.

- Mobile test automation with **Maestro**
- UX/UI analysis with **Claude Vision** for visual issue detection
- Real-time Device Streaming via **WebSocket**
- Web dashboard for device monitoring and control

**Stack:** Maestro, Android SDK, Claude Vision API, WebSocket, React

### QASL-Manual – QA Manual Platform PLATFORM

Complete web platform for QA Manual team management with integrated Shift-Left workflow.

- Full management: Epics, User Stories, Test Suites, Preconditions, Test Cases
- Execution flow: Run → Pass/Fail → Defects → Retesting
- Dashboard with metrics: 408 TC, 99 executions, 35.4% pass rate
- CSV import from SIGMA Analyzer
- IEEE 829 reports for formal documentation

**Stack:** React, TypeScript, Node.js, PostgreSQL

### QASL-Monitor – Unified Dashboard DASHBOARD

Unified control center integrating metrics from all QASL Ecosystem tools.

- Centralized dashboard with Streamlit
- Consolidated metrics from QASL Framework, INGRID, Sentinels, and Mobile
- Executive visualization for stakeholders

**Stack:** Streamlit, Python, Grafana, InfluxDB

## METHODOLOGY

### Shift-Left QA Methodology Suite

Comprehensive 6-phase methodology for implementing Shift-Left Testing in organizations.

- Based on **ISTQB v4.0, IEEE 829/830, and ISO/IEC 25010**
- ISTQB-style test documentation templates (Test Plan, Test Design, Test Cases)
- Process guides for Agile/Scrum teams with sprint integration
- Organizational adoption proposals with ROI metrics and risk reduction

## EDUCATION

### B.S. Communications & Electronics

ESCOELFA · 1985 – 1989

## CERTIFICATIONS

- **ISTQB Foundation Level** – ISTQB (in progress)
- **Playwright Certification** – UPEX (2023)
- **API Testing Certification** – UPEX (2024)

## LANGUAGES

- **Spanish:** Native
- **English:** Professional / B2+ (technical reading, writing, conversation in progress)