

Liam Wells

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SUMMARY

Senior **QA Automation Engineer** with 7+ years delivering UI, API, and **BDD** quality engineering for **scientific** software and laboratory data workflows. Builds scalable automation frameworks with Java, Python, TypeScript, Playwright, **Selenium WebDriver**, TestNG, PyTest, Karate, Cucumber, Jenkins, AWS, and Allure. Recent work supports LIMS platforms, chemical sample intake, chain-of-custody controls, result approval, units of measure, integrations, and scientific dashboards. Leads Gitflow practices, pipeline reliability work, dynamic locator diagnosis, network-state testing, and evidence-based defect analysis across distributed squads. Uses GitHub Copilot, Windsurf, and Claude for test design, refactoring, edge-case analysis, and junior engineer coaching. Ready to help a scientific software team shorten feedback cycles, strengthen release confidence, and deliver dependable automation across UI, API, and BDD layers.

EXPERIENCE

Senior QA Automation Engineer

April 2025 - Present
Raleigh, North Carolina

HelixPoint Laboratory Technologies

Owns automation strategy for a cloud LIMS platform supporting chemical sample intake, chain-of-custody controls, result approval, and scientific dashboards. Guides framework modernization, API coverage, pipeline operations, AI-assisted quality practices, and technical coaching across product squads.

- Rebuilt **Playwright TypeScript** coverage with asynchronous fixtures and resilient locators for laboratory release workflows.
- Added Allure attachments and traces, giving release teams clearer evidence during complex sample approval investigations.
- Extended **Java** Selenium WebDriver and **TestNG** suites during gradual migration toward modern Playwright browser coverage.
- Designed Karate API suites validating sample services, unit conversions, authentication paths, and downstream integration behavior.
- Maintained **Jenkins** pipelines on AWS EC2 with S3 artifacts and CloudWatch regression monitoring.
- Applied **Gitflow** reviews with Copilot, Windsurf, and Claude for safer test scaffolding and edge-case analysis.

QA Automation Engineer

January 2023 - March 2025
Durham, North Carolina

Apex Meridian Analytics

Delivered quality engineering for scientific visualization and **laboratory** reporting products used by analytical chemistry and materials research groups. Built shared Python automation, expanded browser and API coverage, translated domain requirements into BDD scenarios, and coached junior engineers.

- Created shared **Python PyTest** framework with asynchronous utilities, fixtures, and service clients for testing.
- Added Playwright coverage for trend charts, filters, exports, and role-based access workflows.
- Paired failures with screenshots, traces, and Allure metadata for faster release triage conversations.
- Translated measurement and exception requirements into Cucumber features with reusable step definitions.
- Built **Jenkinsfile** stages for parallel execution, environment provisioning, result publishing, and rerun analysis.
- Coached three junior engineers on **dynamic locators**, flaky-test diagnosis, Claude, and **GitHub Copilot**.

QA Automation Engineer

July 2020 - December 2022
Charlotte, North Carolina

Cobalt Ridge Software

Expanded quality engineering for a LIMS product connecting instrument data, sample records, and customer result portals. Maintained browser suites, added **REST** integration coverage, improved reporting evidence, and partnered with domain specialists on **chemical** workflow validation.

- Replaced brittle Selenium selectors and synchronized browser actions with asynchronous service responses.
- Added Karate coverage for registration, result status, permissions, and units-of-measure validation.
- Configured Allure dashboards with attachments, environment details, historical trends, and failure categories.
- Managed **Git** feature branches, pull requests, webhooks, and controlled integrations across four product modules.
- Converted chemical workflow specifications into boundary, negative, and data-integrity tests for Jenkins execution.
- Improved release readiness discussions through clearer failure evidence and domain-focused regression coverage.

Junior QA Automation Engineer

October 2018 - June 2020
Greensboro, North Carolina

Blue Oak Digital Labs

Supported supervised automation for web applications capturing laboratory observations, managing chemical samples, and reviewing instrument-derived records. Built foundational Java, Python, BDD, Jenkins, Git, AWS, and scientific data testing experience alongside senior quality engineers.

- Developed **Java** utilities, Selenium page objects, and TestNG cases for sample workflows.
- Added **Python** PyTest checks for service responses and database-facing laboratory data validations.
- Converted manual acceptance scenarios into **Cucumber** features and reusable step definitions.
- Created Jenkins jobs for scheduled browser suites with archived logs and screenshots.

- Used structured defect evidence to separate application defects from environment and timing failures.
- Practiced Git **branching** and pull requests while learning **AWS** test environments and scientific presentations.

PROJECTS

Cloud LIMS Regression Modernization 📅 2025

Improved release confidence through asynchronous Playwright coverage, Karate service checks, Allure evidence, and AWS-backed Jenkins regression operations for laboratory workflows.

Scientific Visualization Quality Framework 📅 2024

Created a Python and PyTest framework for charts, exports, measurement data, role paths, and API validation across scientific reporting workflows.

Chemical Workflow BDD Library 📅 2022

Turned laboratory specifications into readable Cucumber scenarios covering sample registration, approvals, exceptions, permissions, and units-of-measure integrity.

LEADERSHIP & AWARDS

- Recognized by engineering leadership for modernizing laboratory automation coverage and improving release evidence quality.
- Selected as a peer mentor for junior engineers learning dynamic locator diagnosis and AI-assisted QA workflows.
- Received team recognition for dependable Jenkins regression support across scientific product releases.

EDUCATION

Bachelor's Degree in Computer Science

2018

University of North Carolina at Greensboro GPA: 3.5

Greensboro, North Carolina

Coursework: Object-Oriented Programming, Data Structures, Software Engineering, Database Systems, Testing Methodologies

CERTIFICATIONS

- AWS Certified Cloud Practitioner 📅 2022
- Certified Tester Foundation Level (CTFL) 📅 2020

TECHNICAL SKILLS

- **Programming Languages:** Java, Python, TypeScript, JavaScript
- **UI Automation:** Playwright, Selenium WebDriver, asynchronous testing
- **Python Testing:** PyTest, Unittest, Python fixtures
- **Java Testing:** TestNG, Java collections, object-oriented programming
- **BDD Frameworks:** Cucumber, Gherkin, Behave
- **API Testing:** Karate Framework, REST, API integration testing
- **CI/CD Platforms:** Jenkins, Jenkinsfile, declarative pipelines
- **Version Control:** Git, Gitflow, feature branching
- **Test Reporting:** Allure Framework, custom dashboards, historical trends
- **AWS Services:** EC2, S3, RDS, Lambda, CloudWatch
- **GenAI Tools:** GitHub Copilot, Windsurf, Claude
- **Scientific Systems:** LIMS, chemical data workflows, scientific visualizations

SKILLS

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|----------------------|--------------------|---------------------|----------------|
| • Playwright | • TypeScript | • Cucumber BDD | • AWS Services |
| • Selenium WebDriver | • TestNG | • Jenkins Pipelines | • API Testing |
| • Java | • PyTest | • Gitflow | • LIMS Testing |
| • Python | • Karate Framework | • Allure Framework | |

PROFESSIONAL AFFILIATIONS

- Member, Association for Software Testing, with focus on practical quality engineering methods.
- Participant, Raleigh technology community, sharing automation patterns and scientific software testing lessons.

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST