

Andrew Jenkins

Senior Test Automation Engineer | AI-Powered Developer Tools

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Who I Am

Senior Test Automation Engineer specializing in AI-powered test automation tools and test infrastructure. For the past 8 years, I've been building test infrastructure and automation at a 400-person clinical trials SaaS company—fully remote from San Diego while collaborating with teams across India, UK, East Coast, and worldwide. I build tools that multiply team productivity—from AI-powered test generation and analytics dashboards to CI/CD infrastructure and developer tooling. Whether stabilizing critical build systems, building intelligent automation, or creating force-multiplier tools, I focus on eliminating toil and enabling teams to work faster.

What I Build

AI Test Automation

- Production RAG systems with domain-specific context
- Conversational IDEs enabling natural language workflows
- Reducing test creation time by >50%

Test Infrastructure & CI/CD

- Build system stabilization preventing org-wide paralysis
- CI/CD optimization (2+ hours to 45 minutes)
- Framework migrations completing stalled initiatives

Developer Productivity Tools

- Full-stack analytics platforms (Angular, Django, MongoDB)
- Custom IDE extensions and developer tooling
- Intelligent search engines democratizing access

Technical Collaboration

- Monthly roadmap presentations to VP Eng/CTO (12+ months)
- Led E2E Reliability Meeting for 2 years
- Troubleshooting Playbook author & knowledge codification

Key Achievements

AI-Powered Test Automation Platform

Built conversational IDE using RAG system with domain-specific knowledge. Experimental platform reducing test creation time by up to >50% through natural language workflows and intelligent code generation.

- AWS Bedrock integration with Claude for custom agent workflows
- Dual-context RAG system combining production codebase with branch-specific context
- Domain-specific knowledge base ingesting Django models and test patterns

Python RAG AWS Bedrock Claude

Test Analytics & Monitoring Platform

Full-stack platform automating test health monitoring and failure analysis. Eliminated 40+ hours/week of manual work, running in production for 2+ years as critical team infrastructure.

Angular Django MongoDB

CI/CD Infrastructure Stabilization

Stabilized failing build infrastructure through systematic fixes. Recognized by leadership for impact, led to formation of dedicated DevOps team.

Jenkins Docker AWS

Professional Experience

4G Clinical

Nov 2023 - Present

Senior Test Automation Engineer | Remote - San Diego, CA

Platform & Framework Architecture

- Built production AI test generation platform using RAG and Claude Code, reducing test creation time by up to >50%
- Designed foundational API testing framework (Python/PyTest) for functional validation
- Built scalable API performance testing framework with custom reporting
- Developed full-stack performance data visualization platform (Angular/Django/MongoDB)

Technical Leadership & Infrastructure

- Primary technical advisor for Test Automation Engineering team
- Founded and led weekly E2E Reliability meeting for 2+ years
- Monthly roadmap presentations to VP Engineering and CTO for 12+ months
- Authored comprehensive Troubleshooting Playbook promoted across company as standard for debugging and problem-solving methodologies

Project Rescue & Optimization

- Led migration of 250+ tests from deprecated library, completing 2-year stalled project in 2 months
- Optimized E2E test login sequence achieving ~60% decrease in duration, improving both functional and performance test execution times

4G Clinical

Jan 2021 - Nov 2023

Software Engineer | Remote - San Diego, CA

- Full-stack development on Django/Angular clinical trials platform (Randomization and Trial Supply Management)
- Built custom Angular UI components and implemented complex Django backend features
- Established foundational Angular unit/integration testing framework with Docker and Jenkins
- Played pivotal role in AngularJS to Angular 10 upgrade
- Collaborated remotely with international agile development teams across East Coast and Belgium

4G Clinical

Dec 2017 - Jan 2022

Software Quality Engineer | Remote - San Diego, CA

- Founding test automation engineer, building frameworks and infrastructure from the ground up
- Built E2E Test Tracker (MongoDB) saving 40+ hours/week, became critical team infrastructure
- Built API testing frameworks and CI/CD pipelines with extensive Docker/Jenkins expertise
- Guided team of 4 developing 250+ test scripts (Cucumber/Protractor), contributed ~40% personally
- Self-studied TestOps, scaled suites for parallel execution (2+ hours to 45 minutes)
- Held concurrent 50% responsibilities with Software Engineer role during 2021

Earlier Career Highlights

Qualitest Group | Test Engineer

June 2017 - June 2018 | San Diego, CA

Led international team of four on Eggplant test automation project as primary state-side lead

The Home Depot (contract) | Software Engineer

July 2015 - Dec 2015 | San Diego, CA

Replatformed "Patio Mix and Match" application using Java, Google App Engine, and JavaScript

Intuit (contract) | Software Quality Engineer

Aug 2014 - May 2015 | San Diego, CA

Authored UI tests for TurboTax "Finish-and-File" team

U.S. Coast Guard | Aviation Electronics Technician, Second Class

Oct 2000 - Oct 2010 | Clearwater, FL

10 years military service specializing in avionics systems. Designed award-winning tool calibration database. Three promotions in 2 years, became Flight Mechanic within 4 years.

Technical Skills

AI & Platform Engineering: RAG Systems, LLM Integration (AWS Bedrock, Claude), Prompt Engineering, Context Management, AI Agent Workflows

Languages & Frameworks: Python, TypeScript/JavaScript, Django, Angular, Playwright, Selenium, PyTest, Cucumber

Infrastructure & DevOps: Docker, Jenkins, AWS (ECS, ECR, Bedrock), CI/CD Pipelines, Build Optimization

Data & Databases: MongoDB, DocumentDB, PostgreSQL, Data Analytics, Performance Monitoring

Education & Remote Work Excellence**University of California, San Diego****Bachelor of Science in Computer Science | 2014**

Graduated from UCSD's nationally top-ranked Computer Science & Engineering program. Completed degree using GI Bill following military service.

8 Years Fully Remote

Proven track record of effective async collaboration and remote team leadership across global teams (India, UK, East Coast, worldwide). Worked East Coast hours from San Diego to maximize overlap. Async-first communication style with Slack and video-optional meetings.