

# Andrew Jenkins

## Test Automation Architect | AI-Powered Developer Tools

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### Who I Am

Platform architect specializing in force multiplication through AI-powered developer productivity platforms and strategic infrastructure leadership. For the past 8 years, I've been the architect behind test infrastructure platforms 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 architect platforms 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

<b>AI Platform Engineering</b> <ul style="list-style-type: none"><li>• Production RAG systems with domain-specific context</li><li>• Conversational IDEs enabling natural language workflows</li><li>• Reducing test creation time by &gt;50%</li></ul>	<b>Infrastructure Architecture</b> <ul style="list-style-type: none"><li>• Build system stabilization preventing org-wide paralysis</li><li>• CI/CD optimization (2+ hours to 45 minutes)</li><li>• Framework migrations completing stalled initiatives</li></ul>
<b>Developer Productivity Tools</b> <ul style="list-style-type: none"><li>• Full-stack analytics platforms (Angular, Django, MongoDB)</li><li>• Custom IDE extensions and developer tooling</li><li>• Intelligent search engines democratizing access</li></ul>	<b>Strategic Leadership</b> <ul style="list-style-type: none"><li>• Monthly roadmap presentations to VP Eng/CTO (12+ months)</li><li>• Led E2E Reliability Meeting for 2 years</li><li>• Troubleshooting Playbook author &amp; knowledge codification</li></ul>

### Key Achievements

<b>AI-Powered Test Automation Platform</b> <p>Architected conversational IDE using RAG system with domain-specific knowledge. Experimental platform reducing test creation time by up to &gt;50% through natural language workflows and intelligent code generation.</p> <ul style="list-style-type: none"><li>• AWS Bedrock integration with Claude for custom agent workflows</li><li>• Dual-context RAG architecture combining production codebase with branch-specific context</li><li>• Domain-specific knowledge base ingesting Django models and test patterns</li></ul> <p>Python   RAG   AWS Bedrock   Claude</p>
<b>Test Analytics &amp; Monitoring Platform</b> <p>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.</p> <p>Angular   Django   MongoDB</p>
<b>CI/CD Infrastructure Stabilization</b> <p>Stabilized failing build infrastructure through systematic fixes. Recognized by leadership for impact, led to formation of dedicated DevOps team.</p> <p>Jenkins   Docker   AWS</p>

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
- Architected scalable API performance testing framework with custom reporting
- Engineered 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
- Architected 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**

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**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**

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### **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.