JEFFREY ZAREND

SENIOR PRINCIPAL SDET | TEST AUTOMATION ARCHITECT | HANDS-ON SOFTWARE ENGINEER

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TECHNICAL PROFILE

Senior principal-level individual contributor specializing in test architecture, software automation, systems integration, and difficult defect isolation across network security, cloud infrastructure, storage, and embedded systems. Builds test frameworks and production-adjacent engineering tools with Python, pytest, Playwright, and REST APIs. Extensive hands-on use of Claude, OpenAI models, and locally hosted LLMs for code/test generation, debugging, and analysis. Focused on hands-on senior/principal individual-contributor engineering roles.

TECHNICAL SKILLS

Test engineering: Python, pytest, Playwright (JavaScript), Robot Framework, C++ unit testing, REST API testing, integration/E2E testing, regression frameworks, CI smoke tests, log and metric analysis

AI-assisted engineering: Claude, OpenAI models, ChatGPT, Copilot, locally hosted LLMs; code and test generation, failure analysis, automation development

Infrastructure and delivery: Linux (Ubuntu/RHEL), Windows, Docker, Bash/shell, Git, GitLab, Jenkins, KVM, ESXi, Hyper-V, AWS EC2/S3, IBM VPC, Azure

Networking and security: FortiNAC, FortiGate, FortiAP, FortiAuthenticator, FortiSwitch, RADIUS, X.509, Active Directory, VLANs, SNMP, Wireshark, TCP/IP troubleshooting

PROFESSIONAL EXPERIENCE

DEKA Research & Development | Software Engineer in Test | Aug 2025 - Oct 2026

- Developed Python/pytest tests for a medical/pharmaceutical fluid-production device, covering both containerized application services and underlying machine-control software.
- Tested software interfacing with robotics, fluid handling, pneumatics, and safety systems; worked across application and physical-control boundaries to exercise integrated behavior.
- Built and maintained automated test coverage using Python and Playwright/JavaScript; contributed thousands of C++ unit tests through AI-assisted coding workflows.

Fortinet - FortiNAC | Senior Principal Software DevQA Engineer | Mar 2022 - Aug 2025

- Designed and implemented pytest and Robot Framework automation for the FortiNAC network-access-control product; retained test results, logs, and system metrics for diagnosis and analysis.
- Engineered complex, customer-representative wired/wireless integration environments spanning RADIUS, X.509 certificates, Active Directory, FortiGate, FortiAP, FortiAuthenticator, and FortiSwitch.
- Developed Python post-processing utilities to structure execution data for AI-assisted analysis and visualization with Copilot and related tooling.
- Investigated high-priority customer escalations and built targeted end-to-end scenarios to reproduce difficult interoperability and security-related failures.

IBM Cloud - Host OS | Software Developer | Mar 2021 - Mar 2022

- Developed Python and shell tooling supporting installation, deployment, and diagnosis of Ubuntu and Red Hat Enterprise Linux hypervisor hosts for IBM Virtual Private Cloud.
- Tested new cloud-cluster deployments and assisted with operating-system hardening and platform integration alongside Canonical and Red Hat.

IBM Cloud - Guest OS | Software Developer | Dec 2019 - Mar 2021

- Built, configured, maintained, and tested Windows and Linux guest operating-system images used by the IBM next-generation VPC platform; coordinated vendor-level integration issues.

IBM Cloud - Platform QA / Storage | Principal QA Engineer | Nov 2016 - Jun 2019

- Created the initial Robot Framework REST API testing harness for an emerging IBM cloud platform, covering virtualized compute, networking, and storage.
- Developed build-verification/smoke-test automation to gate code merges; designed white-box integration tests for block and file storage subsystems and reusable Python testing libraries.

Hitachi Data Systems | Specialist Software QA Engineer | Apr 2016 - Nov 2016

- Tested HCP object storage using REST, Amazon S3, and HSwift interfaces; owned system setup and integration validation for the Veritas Enterprise Vault adapter.

DataGravity | Member of Technical Staff | Aug 2015 - Mar 2016

- Performed Python/REST API and developer-level integration testing of a new storage-replication feature.

Cimpress / Vistaprint | Lead Quality Engineer | Nov 2014 - Aug 2015

- Tested backend REST services and cloud-processing migration; automated image comparison and Perl-based regression checks for print-rendering workflows.

Synacor | Principal Quality Engineer | Dec 2013 - Oct 2014

- Built REST service smoke, integration, and regression automation from scratch; integrated repeatable execution with Jenkins.

Dell | Principal QA Engineer | Oct 2008 - Dec 2013

- Tested iSCSI storage systems across Windows, VMware ESX, and Hyper-V; built hundreds of automated test and diagnostic scripts.

SeaChange International | Principal QA Engineer | Apr 2003 - Oct 2008

- Developed Perl regression harnesses for video-on-demand and storage server products; tested SAN/NAS/iSCSI, TCP/IP, CIFS, and Samba integration.

Pelago Networks | SQA Technical Lead | Jan 2001 - Mar 2003

- Automated interoperability and protocol testing for ATM/SS7 service-node systems using Perl and Tcl/Tk, including traffic-generator integration.

Ascend Communications / Lucent | Senior Software QA Engineer | Oct 1998 - Dec 2000

- Tested ATM/Frame Relay switching platforms and cross-product network interoperability. Earlier technical roles with DEC and IBM mainframe systems.

SELECTED INDEPENDENT ENGINEERING PROJECTS

ExplicitLang - native compiler/toolchain: Developing an ahead-of-time systems-language compiler with shared intermediate representations, native x86-64/ARM64 backends, staged bootstrap builds, and automated compiler regression testing (HONKER).

ListMyDay - mobile client and API service: Developed a Swift iPhone/iPad client and Python/FastAPI service with tenant isolation, secure device pairing, TLS reverse proxy, and recurring-item synchronization.

EDUCATION

Owens Technical College - Associate Degree in Applied Business, Computer Programming