

FELIPE J. RUIZ

Systems & Automation Engineer | QA & AI Workflow Specialist

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PROFESSIONAL SUMMARY

Systems & Automation Engineer with a strong foundation in QA testing, AI workflows, and data-driven analysis. Skilled in scripting, workflow optimization, and systems-level troubleshooting across macOS, Windows, and networked environments. Experienced in debugging asynchronous processes, reverse-engineering system behavior, and building automated maintenance scripts that improve reliability and performance. Known for clear documentation, resilient problem-solving, and translating complex technical issues into actionable, audit-ready solutions.

PROFESSIONAL WORK EXPERIENCE

NITAV Consulting — IT Consultant / QA Development

Hillside, NJ • May 2014 – August 2016

Provided systems-level troubleshooting, diagnostics, and workflow optimization across mixed macOS/Windows environments. Developed and executed QA test plans for web applications, including regression testing, interface validation, and defect analysis. Built automation scripts to streamline maintenance, data handling, and system monitoring tasks. Analyzed logs, network behavior, and performance metrics to identify root causes and improve system reliability. Documented procedures and testing results to support repeatable, audit-ready workflows.

Long Island University (Brooklyn Campus) — Technical Support, Information Systems

Brooklyn, NY • February 2013 – May 2014

Supported a high-volume technical environment serving 9,000+ students, faculty, and staff, resolving hardware, software, and network issues across mixed macOS/Windows systems. Managed technical equipment inventory, coordinated repairs, and maintained accurate asset tracking to ensure operational readiness. Prepared monthly laptop-rental reports and analyzed usage patterns to improve resource allocation. Performed data recovery and malware remediation using tools such as StarTech SATDOCKU3S and HDD Regenerator to restore system integrity. Documented incidents, configurations, and troubleshooting steps to support consistent, repeatable workflows across the support team.

Law Debenture Trust Company of New York — Trust Analyst, Business Technology

New York, NY • July 2017 – December 2017

Managed daily processing and reconciliation of **\$7M** in corporate bond transactions across multiple financial systems. Audited transaction reports using the CCF II note-processing system to identify discrepancies and correct data issues. Led a fixed-asset data migration using the TransStar Bondholder platform, coordinating with shareholders and internal teams to validate accuracy. Investigated trade issues by reviewing bank notes, synoptic reports, and financial statements, providing clear findings to auditors and senior stakeholders. Improved operational reliability by documenting procedures, identifying process gaps, and recommending workflow enhancements.

Countrywide Home Loans (acquired by Bank of America) — Funding Post Closer, Mortgage Technology

New Orleans, LA • May 2005 – January 2007

Processed and validated a daily pipeline of 50+ mortgage files, ensuring accuracy, compliance, and readiness for funding within strict timelines. Analyzed loan documentation—including title transfers, VOE, bank statements, and closing packages—to identify discrepancies and prevent fraudulent transactions. Coordinated with underwriting, closing agents, and financial institutions to resolve documentation issues and maintain data integrity across loan systems. Supported restoration of IT workflows after Hurricane Katrina damaged the regional Information Technology Server (ITS), contributing to business continuity and data recovery. Standardized review procedures and documented repeatable quality-control steps to improve post-closing accuracy.

U.S. Bank — Bond Operations Specialist, Corporate Trust Services

New York, NY • June 1998 – April 2004

Worked under senior supervision to support the rollout and validation of **SPANS**, U.S. Bank's first-generation online bond-processing system built from the ground up. Performed structured QA-style testing long before formal QA roles were common, validating new security workflows, identifying defects, and documenting system behavior for developers and operations leads. Managed daily processing and reconciliation of **\$10M+** in corporate bond redemptions and certificate transactions in a high-volume environment. Resolved complex trade discrepancies, including a **\$1.1M J.P. Morgan issue** involving Geneva and Dallas desks. Ensured data integrity across multiple financial platforms by reviewing transaction reports, verifying settlement details, and escalating anomalies. Contributed to early process documentation and reliability improvements during the system's initial deployment phase.

EDUCATION

Pace University – Seidenberg School of Computer Science & Information Systems Graduate-level coursework in Computer Science
New York, NY

Long Island University – School of Business & Information Science Master of Science in Computer Science (with Distinction)
Brooklyn, NY

Hunter College – City University of New York Bachelor of Arts in Political Science New York, NY

PROJECTS

AI-Driven Aircraft Noise Complaint Agent (Planned) Designing an AI-powered system that detects aircraft noise and visual overflights using sensor input, classifies events with ML models, and automatically submits structured complaints to FAA and PANYNJ via AirNoise.io..

AI-Enabled Receipt Processing & Bookkeeping Agent (Planned) Building an AI-based receipt-scanning agent that extracts vendor, date, line items, totals, and tax information using OCR and LLM-based parsing, then stores structured data into a bookkeeping database for audit-ready financial tracking.

Automated System Maintenance Script (macOS) Shell-based automation for cleanup, logging, and diagnostics; improved system reliability through temp cleanup, log rotation, and background process monitoring.

Asynchronous Workflow Debugging Framework Reverse-engineered interactions between Suricata, Wireshark, TG Pro, and macOS processes; built a reproducible debugging workflow with cross-tool traceability.

Data Processing & QA Validation Pipeline Developed Python/Pandas workflows to clean, transform, and validate datasets; automated repetitive checks to improve consistency across test cycles.

TECHNICAL ACHIEVEMENTS

Designed and automated cross-platform maintenance workflows using shell scripting, improving system stability and reducing manual cleanup tasks. Reverse-engineered asynchronous interactions between macOS processes and security tools (Suricata, Wireshark, TG Pro) to isolate performance bottlenecks and create reproducible debugging workflows. Built data-validation pipelines using Python and Pandas to streamline QA checks and ensure consistency across test cycles. Documented complex troubleshooting procedures with audit-ready clarity, enabling repeatable workflows and faster root-cause analysis.

AWARDS

Merit Award – Countrywide Home Loans (now Bank of America Mortgage Division) Recognized for taking initiative to reconstruct and troubleshoot the Information Technology Server System (ITSS) following Hurricane Katrina, restoring critical workflows and supporting business continuity.

Service of Excellence Award Nomination – U.S. Bank Nominated for outstanding customer service and operational reliability in Corporate Trust Services, including resolution of high-impact trade discrepancies.

Graduate Academic Distinction – Long Island University Awarded for outstanding academic performance in the Master of Science in Computer Science program within the School of Business, Public Administration & Information Science.

Sigma Beta Delta Honor Society – Long Island University Inducted into the international honor society for business, management, and administration in recognition of high scholastic achievement.

CERTIFICATIONS

Edureka — Manual Tester (Grade A)
Simplilearn (with Purdue University) — Applied Generative AI Specialization
Great Learning (with Microsoft Azure) — Generative AI for Business: OpenAI Program

Coursiv WebApp Certification — Claude 3.7, Stable Diffusion, DeepSeek, DALL·E, Midjourney

Planned Certifications:

CompTIA — AI Essentials
Columbia University — Learning AI Through Visualization
Ministry of Testing — Software Quality Engineering