

Vlad Bondarenko

SDET | AI Quality Engineer | LLM & Agent Evaluation | Test Automation

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SDET and AI quality engineer with 6+ years automating and verifying regulated software: ophthalmic surgical systems at Bausch + Lomb, mortgage platforms at U.S. Bank, and healthcare systems at Express Scripts and Centene. Builds test automation from scratch and applies the same discipline to AI agents: measurable reliability, root-cause analysis, and guardrails enforced in code and CI rather than in prompts. Completing an A.A.S. in Cybersecurity.

Technical Skills

Test automation: Playwright, Cypress, Selenium, Cucumber/BDD, Ranorex, Karate DSL, Postman, axe-core, Python unittest, pytest, node:test

Languages: JavaScript, Python, Java, C#, C++, SQL; Kotlin, Swift, Objective-C, PHP

AI and agent engineering: Claude Code, LLM orchestration, agent evaluation and eval gates, failure analysis, tool-use agents, guardrails, prompt design, AWS Bedrock

Engineering and DevOps: GitHub Actions, Jenkins, Git, Docker, AWS, Cloud Foundry, Node.js, Flask, SQLite, CMake

Quality and regulated systems: FDA medical devices, HIPAA, mortgage lending, WCAG; regression, integration, E2E, API, UAT, hardware/software verification, TDD/BDD; JIRA, Zephyr, IBM Rational RequisitePro

Projects and Open Source (2026)

Take the Wheel: AI browser agent

Personal project • JavaScript, Node.js, Chrome extension, Claude • github.com/vladbondarenko97/take-the-wheel

- Built a Chrome side panel and Node.js runner that let Claude drive a live, logged-in browser tab, with streamed step events, resumable sessions, human-in-the-loop handoffs and a stop control.
- Found that the agent's tool allowlist was not the real security boundary (it exposed the user's GitHub login and local files) and replaced it with a fail-closed guard on every command, covered by 67 test cases in CI on Node 20, 22 and 24 and a live end-to-end check across Haiku, Sonnet and Opus.
- Caught a false-completion defect (reported 25 of 25 done; 23 verified) and redesigned page reading to reach a verified 25 of 25 in 4 turns instead of 29, cutting cost per task from \$0.33 to \$0.034.

AnyPS5: open-source macOS compatibility

Open-source contribution • C++, Python, CMake, macOS, systems debugging • Merged PRs [#7](#) and [#8](#)

- Diagnosed why a PS5 title failed on macOS hosts: it stopped at load on two missing libkernel imports, then crashed on its first C++ exception when the unwinder hit an unimplemented call. Implemented `kqueue/kevent` and `sceKernelGetModuleInfoFromAddr` for macOS.
- Added guest regression tests and macOS unwind fixtures, and validated against the full 712-test suite before maintainer review and merge.

Market Terminal: market data pipeline and dashboard

Personal project • Python, SQLite, Flask • github.com/vladbondarenko97/market-terminal

- Built a pipeline that collects market data from about a dozen sources, stores every raw response (SHA-256 deduplicated) and renders dashboards, reports and a Flask API from one immutable snapshot per run.
- Designed for testability: 400+ offline tests (unit, API routes and an offline end-to-end run); any network call in a test fails it; CI re-runs the full suite with the clock 400 days ahead, which surfaced three date-dependent bugs.
- Root-caused data defects to guarded fixes, including a chart where 69 of 325 rows used a frozen benchmark price; a failed source is reported as “missing” with a reason, never a placeholder.

vlad.yt: portfolio site with its own test suite

Personal project • JavaScript, three.js, Playwright, GitHub Actions • vlad.yt

- 26 Playwright tests on desktop and phone, including axe WCAG A/AA, a no-WebGL fallback and structured-data checks; CI deploys only when every test passes and the committed bundle matches a fresh build, then smoke-tests the live site.

Experience

Software Verification Engineer - Research & Development

Bausch + Lomb (contract) | St. Louis, MO | Mar 2026–Present

- Author verification protocols and dry-run procedures for FDA-regulated ophthalmic surgical systems (a next-generation platform and Stellaris), covering software, hardware integration and requirements testing.
- Audited legacy firmware protocols against resolved UI defects; retired obsolete requirements and removed dozens of invalid test cases before migration into IBM Rational RequisitePro.
- Isolated DMS configurations so verification can run remotely, reducing dependence on physical lab access.

Career Break: Full-Time Cybersecurity Studies

St. Louis Community College | Nov 2022–Mar 2026

- Studied cybersecurity full time toward an A.A.S. (in progress): ethical hacking, network defense, secure software design and CompTIA Security+ preparation.

Business Technology Analyst (QA Analyst)

U.S. Bank (contract) | St. Louis, MO | Oct 2019–Nov 2022

- Planned and ran end-to-end, integration and regression testing across the Black Knight, Seller Digital and Empower mortgage platforms (Conventional, FHA, VA and HFA loans).
- Turned BRDs, FRDs and user stories into test plans and test cases in JIRA and Zephyr; owned scope, timelines, defect management and go/no-go input for multiple initiatives.
- Maintained critical test data (Fannie Mae casefile IDs, Freddie Mac key IDs, credit reports, XML artifacts) so environments stayed accurate and audit-ready.
- Mentored and onboarded QA testers; wrote defect tickets with root-cause detail and supported post-production triage.

QA Automation Engineer

Centene Corporation | St. Louis, MO | Oct 2018–Apr 2019

- Built UAT and end-to-end automated test scripts from scratch with Ranorex (C#) and Cypress (JavaScript).
- Helped establish a CI/CD pipeline in a TDD team; contributed to solution design in JavaScript, Java and C#.

QA Automation Engineer II

Multiply / Answers.com (contract) | St. Louis, MO | Jul 2018–Sep 2018

- Wrote the test plan and built a Cypress and JavaScript end-to-end suite from scratch for a WordPress platform, cutting manual regression effort by about 50%.
- Validated back-end data with SQL, tested WCAG accessibility and maintained a Docker-based QA environment.

QA Engineer

Express Scripts via WWT Asynchrony (contract) | St. Louis, MO | Nov 2017–Jul 2018

- Tested a prescription portal handling PII and PHI against HIPAA requirements; automated unit, API and end-to-end tests with Selenium, Cucumber, Java and Postman.
- Worked with Jenkins, AWS and Cloud Foundry; completed WWT Asynchrony's Agile and TDD certification.

Mobile Cloud Developer Co-op

Emerson | St. Louis, MO | Dec 2016–Nov 2017 (began as Sensi Customer Advocate, May–Dec 2016)

- Developed Android and iOS features for the Sensi smart Wi-Fi thermostat apps (Java, Kotlin, Swift, Objective-C) using pair programming and TDD; wrote unit and user-acceptance tests.
- Ran exploratory hardware and software testing on the thermostat ahead of its public launch; integrated Salesforce SOS live-agent video support for 100,000+ app users.

Education

A.A.S., Cybersecurity (in progress): St. Louis Community College, 2022–Present

Associate Degree in General Education: St. Louis Community College Meramec, 2016–2018 • GPA 3.8, Honor Society