

Mikhail Shchegolev

QA Lead & AI Engineer & Data Engineer

mshchegolev@gmail.com | Telegram: [@mshchegolev](https://t.me/mshchegolev) | mshchegolev.com | [LinkedIn](#) | [GitHub](#) | [X/Twitter](#)

Location: Tbilisi, Georgia | Citizenship: Russia | Remote preferred | Open to rare travel

SUMMARY

Senior QA Lead, AI Engineer, and Data Engineer with **16+ years** of hands-on experience in test automation, ETL pipelines, and AI/ML systems. Authored **2,000+ E2E automated tests** covering core business processes across 7 companies. Built **10+ test environments** and **4+ CI/CD pipelines** from scratch. Managed QA teams of up to **10 engineers**. Designed and deployed a production **RAG/LLM orchestration platform** with 5 AI providers. Expert in Python, Java, Selenium, pytest, Docker, Spark, Airflow, Kafka. Advocate of Spec Driven Development and TRIZ methodology.

SKILLS

Programming: Python, Java, Go, SQL, JavaScript, C#, Ruby, Bash

Test Automation: pytest, Selenium, Playwright, Allure, TestNG, BDD/Behave, TestComplete, JMeter, Selenium

AI / ML: RAG, LLM orchestration, LangChain, LangGraph, Pydantic AI, OpenAI API, Anthropic API, Gemini API, Prompt Engineering, AI Agents

Data Engineering: Apache Spark, PySpark, Airflow, Hive, Kafka, ETL pipelines, S3, HDFS, Vertica, Oozie

Databases: PostgreSQL, MongoDB, Oracle, ClickHouse, Redis, RabbitMQ, InfluxDB

DevOps / Cloud: Docker, Kubernetes, Jenkins, GitLab CI, TeamCity, AWS, Google Cloud, Azure, Nginx, Linux

Monitoring: ELK Stack, Sentry, TICK Stack, Zabbix, Allure TestOps, Grafana

Management: Jira, Confluence, Testrail, Agile/Scrum, Test Strategy, QA Process Design, Team Leadership, Hiring

Frameworks: FastAPI, Django, aiogram, Pydantic, SQLAlchemy

EXPERIENCE

QA Test Lead — BigData ETL

November 2021 — Present

JettyCloud LLC | IT, System Integration | Tbilisi

- Designed and implemented a **custom BDD test framework**: JSON-driven test specs auto-populate data sources (Oracle, MongoDB, PostgreSQL, CSV, S3, HDFS, Kafka, API), trigger ETL jobs/DAGs, and validate target data stores
- Authored **~100 ETL pipeline validation tests** and **~800 E2E business process tests** covering the full data warehouse
- Enabled **parallel test execution** in Docker containers via Jenkins (multi-threaded), reducing test suite runtime by 60%
- Validated data integrity across Hive, S3, Vertica, PostgreSQL, Oracle, MongoDB, and Kafka targets
- Led team of 3 QA engineers (80% hands-on ETL testing, 20% team leadership and process improvement)

Tech: Python, Allure, BDD, Hive, Spark, PySpark, S3, AWS, Airflow, Oozie, Kafka, PostgreSQL, Oracle, MongoDB, Jenkins, Docker

Test Manager — PLATON National Tolling System

June 2018 — November 2021

RT-Invest Transport Systems | Logistics, IoT, FinTech | Moscow

- Analyzed the testing process for the national toll collection system (SVP), **identified key error points** causing significant financial penalties
 - Prepared and delivered **C-level presentation** to amend vendor contracts, resulting in measurable quality improvements and penalty reduction
 - **Full-cycle IoT device testing** for 12+ ton vehicles: from requirements and chip/module selection through to acceptance testing (PSI per PMI standards)
 - Built **E2E test automation** for the unified telematic transport platform using pytest, Selenium, Docker, and Selenoid
 - Maintained and developed the testing system for **PLATON** (federal tolling platform serving millions of vehicles)
 - Integration testing across RabbitMQ, MongoDB, PostgreSQL, Redis, InfluxDB; performance testing with JMeter
- Tech:** pytest, Selenium, Selenoid, Docker, GitLab CI, TeamCity, Jira, Testrails, RabbitMQ, MongoDB, PostgreSQL, Redis, InfluxDB, JMeter

Chief Test Engineer

December 2017 — May 2018

ATOL Group | IT, System Integration | Moscow

- **Built QA from scratch** for 2 products (AtolService, AtolOnline): hired and managed team of 4 engineers
- Created **400+ functional test cases**, automated **300+ E2E tests** covering core business flows
- Deployed **6 test environments**: 2 for hardware testing, 3 for service testing (functional, regression, load), 1 for developers
- Implemented **ELK stack** with dashboards and **Sentry** for real-time client-side error monitoring
- Established CI/CD pipeline: Testrail + Jenkins automation, test data generator, reporting system
- Created transparent testing process with clear metrics for development and management teams

Tech: Python, Behave, pytest, Selenium, Jenkins, Testrail, Jira, ELK, Sentry, PostgreSQL, RabbitMQ, C#**Senior Automation Test Engineer**

November 2014 — December 2017

DINS (RingCentral) | IT, Telecom | Saint Petersburg

- Wrote **200+ E2E automated tests** (Java/TestNG/Selenium) and maintained **500+ existing tests**
- Deployed **TICK stack and Zabbix** monitoring across dev, lab, stage, and production environments
- Created load testing infrastructure: **JMeter + Jenkins + TICK** with custom profiles
- Automated test environment provisioning (DevOps) across multiple cloud platforms

Tech: Java, TestNG, Selenium, Python, Ruby, Docker, Mesos, AWS, Google Cloud, JMeter, Jenkins, TICK, Zabbix, ELK, MongoDB, PostgreSQL, Redis, RabbitMQ, InfluxDB**QA Team Lead**

May 2012 — November 2014

FinTech JSC | IT, System Integration | Moscow

- Managed **team of 10 QA engineers** across 3 simultaneous projects
- Created testing strategies, plans, and scenarios; established clear QA metrics for dev and management
- Designed and executed load testing campaigns; **successfully delivered project to production**

QA Specialist → Senior QA Specialist

March 2009 — May 2012

Asteros Group / GosStroiSmeta | IT, Construction Software | Moscow

- Authored **~500 E2E automated tests** for core business processes (TestComplete) at GosStroiSmeta
- Designed and documented performance evaluation methodologies for construction estimation software
- Built internal and customer-facing **bug-tracking systems** from scratch
- CRM functional testing (Microsoft Dynamics) at Asteros; implemented **Microsoft Test Manager (MTM)**
- Created cross-department collaboration workspace on SharePoint

Tech: TestComplete, C#, SharePoint, MTM, Zabbix, Azure, vCenter**KEY ACHIEVEMENTS**

- **2,000+ E2E automated tests** authored across all positions (Python, Java, BDD, TestComplete)
- **2,200+ test cases** maintained and supported throughout career
- **10+ test environments** designed and deployed (hardware, service, load, development)
- **4+ CI/CD pipelines** built from scratch (Jenkins, GitLab CI, TeamCity)
- **6+ monitoring/reporting stacks** deployed (ELK, Sentry, TICK, Zabbix, Allure, MTM)
- Built production **RAG/LLM platform** (mshchegolev.com) with 157+ API endpoints, 5 LLM providers, blue/green deployment
- Presented to **C-level executives** to change vendor contracts, resulting in quality improvements and penalty reduction

SIDE PROJECTS

- **Multi-AI Suite** (mshchegolev.com) — Production SaaS: parallel LLM queries, RAG document analysis, health tracking, VPN management. FastAPI, Docker, 530+ tests. mshchegolev.com
- **AIQA Pipeline** — AI-powered QA: test generation from Jira, quality gates, Allure integration, Spec Driven Development
- **Telegram AI Bot** — RAG over personal knowledge base with ChromaDB, dual memory, semantic search

EDUCATION

Moscow Institute of State and Corporate Management	2008
Faculty of Information Technology — Audit of Accounting & Information Systems — Engineer degree	
MIIGAiK — Moscow State University of Geodesy and Cartography	2004
Faculty of Geodesy — Computer Science & Engineering	

CERTIFICATIONS & TRAINING

Project Management in MS Project 2010 (Microsoft) | Test Management (Luxoft) | Project Management for Test Managers (Luxoft) | Programming for Testers: Java (Software-testing.ru) | Performance Testing of Web Applications (Software-testing.ru) | Test Design Workshop (Software-testing.ru) | Exploratory Testing (Software-testing.ru) | Business Writing (TrennerProfi) | Speed Reading / NLP (mcnlp.ru)

LANGUAGES

Russian — Native | **English** — B2 (Upper-Intermediate)