Krzysztof Szewczyk

Senior Test Automation Engineer · Test Architect

Python · Embedded Systems · Hardware & Software Validation · CI/CD

I design and build complete automated test solutions: the framework, the test environment, the CI/CD pipeline and the tests themselves. 19 years of testing medical devices, automotive electronics and industrial embedded systems, from Python and pytest today to LabVIEW and TestStand on production lines.

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SKILLS

Programming & automation
Python · LabVIEW · C# / .NET · SQL · Claude Code · GitHub Copilot

Embedded & protocols
Embedded systems · CAN · python-can · PCAN · UDS · RS232 · I2C · SPI · MQTT · Modbus

CI/CD & DevOps
GitLab CI · Jenkins · Azure DevOps · Docker · Git · Gerrit · AWS

Test management & traceability
Test architecture · Test planning & design · Requirements traceability · Polarion · Regression testing · Test reporting · Mentoring test engineers

Test frameworks
pytest · Robot Framework · Squish · Selenium · TestComplete · NI TestStand · NI Vision

Hardware integration
Test bench design · ECU & device simulation · HIL · ATE / EOL · MCU / NAND flashing · Siemens S7 · Beckhoff TwinCAT · WAGO

Medical & automotive validation
Medical device system & software validation · Automotive SPICE · ECU validation · Cloud-connected devices · GUI testing of embedded devices · Process capability (Cpk)

EXPERIENCE

GlobalLogic
Oct 2021 — present

Košice, Slovakia · Hybrid · engineering services for international customers

Medical **Senior Test Engineer · test architecture** Mar 2026 — present

A medical device manufacturer. Test architecture, CI/CD and test framework for an embedded medical device.

- Designing and implementing the test architecture and the Python test framework for the project.
- Building the CI/CD pipeline in GitLab, with Docker images for the build environment and for the developers' local environment.
- Developing integration tests and automated GUI tests of the embedded device.

Python · pytest · GitLab CI · Docker · Git

Medical **Senior Test Engineer** Mar 2025 — Mar 2026

A medical device manufacturer. System and software validation using physical devices and simulated devices running in Docker containers.

- Developed and implemented system and software test cases.
- Automated GUI tests of the device with Squish and pytest.
- Validated the system against both physical and simulated devices.
- Reported test results and analysed failures.

Python · pytest · Squish · Jenkins · Docker · Git · PyCharm

Automotive **Senior Test Engineer** Oct 2023 — Mar 2025

A Tier 1 supplier to global car makers. System and software validation of an ISA box, following Automotive

SPICE.

- Designed and built a custom Python and Robot Framework test automation framework, and the automated test cases on top of it.
- Built the complete test environment: a bench that simulates several ECUs and electronic modules, including custom hardware that I designed and integrated.
- Tested the communication interfaces and data exchange, battery backup, MCU and NAND flashing, USB map updates, GNSS and mobile data.
- Ran the Jenkins CI/CD pipeline, connected test results to the traceability system, and designed the testing workflows.
- Supported and trained the test engineers working with the framework.

`Python · Robot Framework · CAN · RS232 · Jenkins · Git · Gerrit · MCU flashing · VS Code`

`Industrial` **Test Engineer** `Feb 2023 — Aug 2023`

A Danish maker of mobile hydraulics and electrification products. A connected device that monitors and controls heavy equipment over the internet or through a local service app.

- Tested the system end to end: the embedded device, the cloud services and the local service application.
- Validated communication between the embedded device and the cloud.
- Specified test cases and automated them in Python with pytest and Selenium.
- Reported bugs and analysed results.

`Python · pytest · Selenium · CAN · MQTT · AWS · Polarion · Azure DevOps · Git`

`Embedded` **Test Engineer** `Oct 2021 — Feb 2023`

- Designed, reviewed and implemented test cases for embedded systems.
- Developed custom test tools in LabVIEW and built automated test sequences in NI TestStand.
- Tested hardware interfaces, analysed results and debugged failures.

`LabVIEW · NI TestStand · CAN · I2C · SPI · debugger · Azure DevOps · Polarion`

Testing Engineer · Marelli `Aug 2013 — Sep 2021`

Kechnec, Slovakia · `Automotive` BMW telematics, radio, video, navigation, clusters

- Owned the end-of-line test for the BMW Entry Navigation unit: 1,100 test steps covering GPS, Wi-Fi, Bluetooth, CAN, radio, flash memory, voltage and current.
- Maintained and optimised the measuring systems and adapted them for new product variants.
- Developed test cases in LabVIEW and TestStand, and vision tests for TFT displays in NI Vision.
- Built production tools, including a software uploader that cut downtime for a software change from 24 hours to 3–4 hours, and did process capability analysis.
- Worked with R&D, and with quality on customer claims and scrap analysis.

LabVIEW Developer · Fitech Sp. z o.o. `Sep 2011 — Aug 2013`

Suski, Poland · `Test systems`

- Developed test plans in LabVIEW and TestStand to customer requirements.
- Specified hardware for ATE and EOL systems, and developed HIL tests.
- Built visual inspection test plans in NI Vision, with software documentation.

Software Engineer · Schrader Electronics `Aug 2007 — Sep 2011`

Belfast, United Kingdom · `Automotive` Machine Operator / Quality Controller 2007–2008

- Developed and optimised production test cases in LabVIEW and TestStand.
- Built new test tools in LabVIEW and Visual Basic, analysed malfunctions and supported ATE repair.
- Trained operators and helped new employees get started.

SELECTED PROJECTS

GLOBALLOGIC · 2021 – PRESENT

Python · pytest · GitLab CI · Docker · 2026 – present

Test architecture for an embedded medical device

The test framework, the GitLab CI/CD pipeline, Docker build and development environments, and the integration and GUI tests for an embedded medical device.

Python · pytest · Squish · Docker · Jenkins · 2025 – 2026

Medical device tests on real and simulated hardware

Automated system and GUI tests for a medical device that run against physical devices and against simulated devices in Docker containers, on Jenkins.

Python · Robot Framework · Jenkins · Oct 2023 – Feb 2025

Automotive ECU automation framework

A Robot Framework and Python framework for an ISA box, connected to git and to a custom test bench that simulates several ECUs and electronic modules. It handles scheduling, reporting and full runs on Jenkins, links results to traceability, and tests several ECUs in parallel.

Python · pytest · Selenium · MQTT · 2023

End-to-end tests for a connected device

Tests that cover a whole connected system for heavy equipment: the embedded controller, its cloud services and the local service application, automated with pytest and Selenium.

Robot Framework · LLM · Python

LLM-generated test cases from requirements

A test framework for an automotive device. It uses Robot Framework with an LLM that turns requirements into test cases.

Python · python-can · PCAN · Aug – Oct 2023

Instrument cluster testing in Python

A Python framework for functional tests of a car's instrument cluster. It drives a PCAN USB device with python-can, for example to set the speed to 100 km/h or the RPM to 1000, and writes TXT and XML test reports.

MARELLI · 2013 – 2021

LabVIEW · TestStand · EOL · 2013 – 2021

BMW Entry Navigation: EOL / final test

I was in charge of the end-of-line test for the BMW iDrive unit: 1,100 test steps covering GPS, Wi-Fi, Bluetooth, CAN, FM, IBOC, DAB, SDARS, flash memory, voltage and current.

LabVIEW · SQL · 2015

Software uploader & remote control

Pushes 50 GB of software to 36 machines (252 slots) at once, with MD5 checks and a database record for each upload. Production downtime for a software change dropped from 24 hours to 3–4 hours.

LabVIEW · SQL

Production line live data

Live statistics for any line, machine or group of machines. Filters by date, serial number and result. Shows failure Paretos (real and pseudo), test-time graphs and Excel export.

CERTIFICATIONS

2026 ✓ GL Certified AI Professional — Claude Code

2026 ✓ GL Certified AI Professional — GitHub Copilot

2026 ✓ AI Fluency for Builders · AI Capabilities and Limitations · Claude 101

2023 ✓ AQA with Python

2023 ✓ TestComplete QA Architect · Web Automation Engineer

2022 ✓ ISTQB® Certified Tester Foundation Level

2018 ✓ Certified LabVIEW Developer (CLD)