

Sergey Ilyev

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Work Experience

T-bank

Moscow, Russia

QA ENGINEER (AUTOMATION / BACKEND)

May 2025 - Present

- Developed and maintained automated backend tests in Kotlin (JUnit) and Scala, increasing test coverage by 10–30%
- Integrated automated launch of Docker-based service into CI/CD testing pipelines using Testcontainers and Docker, improving test reliability and reducing setup time
- Automated regression testing for microservices releases, reducing manual effort and release time
- Tested and validated APIs (REST, gRPC) using Postman, Swagger, and CLI tools during monolith-to-microservices migration
- Enhanced test framework with dynamic test data generation, simplifying test cases and improving maintainability
- Reviewed and refined task specifications to support shift-left testing approach, identifying issues early in development
- Conducted load testing (~1500 RPS) to evaluate horizontal scalability across multiple application instances

Laboratory of Advanced Data Storage Concepts, MIPT

Dolgoprudny, Russia

SOFTWARE ENGINEER

Jul. 2023 - Dec. 2025

- Developed and maintained Python software for controlling experimental equipment using VISA and socket protocols, used by 30+ researchers
- Migrated legacy measurement codebase from Matlab to Python, improving maintainability and performance
- Built data processing pipelines, reducing analysis time by 70% through automation
- Developed interfaces to C-based libraries for hardware control
- Implemented automated testing and improved development workflows
- Introduced automated feedback system based on programmable logic device into experimental setup
- Contributed to open-source package PyMeasure for remote equipment control
- Reduced onboarding time by documenting measurement software and workflows

Skills

Programming Languages

Python, Kotlin, Scala, C++, SQL, Matlab

DevOps & Automation

Docker, GitHub Actions, Gitlab CI/CD, Testcontainers, Kafka, Ansible, pre-commit, nox

QA & Testing

Postman, Swagger, Allure, JUnit, pytest, Selenium, Mockingbird, API testing, regression testing

Backend & APIs

REST API, gRPC, FastAPI, SQLAlchemy, asyncio, Pydantic, PostgreSQL, Redis, etcd, Cassandra

Desktop Development

Qt, aiogram

Other

Git, Linux, DBeaver, Sage, uv, mypy, \LaTeX

Languages

English, Russian

Education

M.S. in Electronics and Nanoelectronics

MIPT(MOSCOW INSTITUTE OF PHYSICS AND TECHNOLOGY)

Dolgoprudny, Russia

Sep. 2024 - Aug. 2026

Route 256: QA Engineer (Python)

OZON

Online

Feb. 2025 - Mar. 2025

Machine Learning Specialization

COURSERA

Online

May 2024

Professional retraining (Software Engineer)

MIPT(MOSCOW INSTITUTE OF PHYSICS AND TECHNOLOGY)

Dolgoprudny, Russia

Sep. 2024 - Jul. 2025

B.S. in Applied Mathematics and Physics

MIPT(MOSCOW INSTITUTE OF PHYSICS AND TECHNOLOGY)

Dolgoprudny, Russia

Sep. 2020 - Aug. 2024

Docker

KARPOV.COURSES

Online

Aug. 2023