

Nikita Lanskov

Senior Software Engineer

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Professional Profile

Senior Software Engineer with 6+ years of experience delivering production infrastructure and backend systems for pharmaceutical and technology companies. I build and automate cloud platforms on AWS, design CI/CD pipelines, and write Python services that power data processing and integration workflows. As a CTO of a 30-person company, I combine hands-on engineering with team leadership, project delivery, and technical mentoring.

Technical Skills

- **Languages:** Python, Bash, JavaScript, Groovy, Lua, Dart
- **DevOps / Infrastructure:** Docker, Kubernetes, Terraform, Terragrunt, Jenkins, GitLab CI, GitHub Actions, Ansible, Chef, EasyBuild
- **Cloud / AWS:** EC2, S3, RDS, Lambda, API Gateway, CloudFront, VPC, EKS, AWS Backup, Cognito, OAuth 2.0, PKCE, OpenID Connect, Keycloak, Azure AD, PAM/Conjur
- **Web Frameworks:** Flask, FastAPI, Django, React, Next.js, Vue, AngularJS, React Native, Flutter
- **Databases:** PostgreSQL, MySQL, Elasticsearch, Firebase
- **ML / CV:** PyTorch, OpenCV, U-Net, Pandas, dataset annotation (QuPath)
- **Other:** Nginx, OpenResty, MuleSoft, Git, Wiki.js, Todoist API, Telegram Bot API (aiogram)

Experience

EPAM Systems

Nov 2021 – Present

Cromwell – Scientific Pipeline Engine on HPC

Apr 2025 – Present

Client: Novartis / EPAM Systems Roles: Backend Engineer

Stack: Python, Pandas, EasyBuild, Cromwell, HPC

- Supporting the Cromwell workflow engine on a new HPC cluster.
- Migrated Cromwell backend from Docker and Singularity to an EasyBuild bundle, packaging all application dependencies into a single module.
- Bundled Python, Perl, and other dependencies via `postinstallcmds` in EasyBuild recipes; separately compiled and packaged Cromwell following upstream build instructions, then combined everything into a single bundle.
- Developing a file structure verification tool for pipeline input validation – redesigned business rules and validation logic while preserving the existing high-level architecture (job queue, submission flow).
- Implemented ETL pipeline for Reconciliation data processing using Pandas.

Document Search Chatbot (GCToC)

Nov 2023 – Feb 2025

Client: Merck / EPAM Systems Roles: DevOps Engineer

Stack: Python, Terraform, AWS Lambda, AWS (API Gateway, S3, Cognito, CloudFront, VPC), JavaScript, Jenkins, GitHub Actions

- Chatbot with advanced document search capabilities for a large international pharmaceutical company.
- Worked as DevOps engineer in a cross-functional team (Tech Lead, ML Engineer, Frontend, Back-end/Search, PM, BA).
- Configured VPC endpoint for API Gateway and integrated with CloudFront; published UI through external infrastructure team's environment.
- Fully migrated CI/CD from Jenkins to GitHub Actions, including pipeline refactoring and Artifactory integration for Lambda artifact storage.

- Automated ETL: built AWS Lambda to import SharePoint reports into MySQL; created Jenkins job as a launch interface, reducing manual workload by ~4 hours/week.
- Created new test environment from scratch, handling MERCK security constraints (CloudFront-managed internet access, S3 bucket policies, Cognito pool overrides).
- Extended and refactored Terraform modules for full infrastructure-as-code coverage.
- Handled security and authorization constraints including Amazon Cognito and CloudFront policies.

iPaaS – API Integration Platform

Jan 2024 – Dec 2024

Client: Merck / EPAM Systems Roles: DevOps Engineer

Stack: Python, Terraform, Terragrunt, Kubernetes, AWS (EKS, RDS, S3), MuleSoft, Flask, Jenkins, GitHub Actions, Grafana

- DevOps engineer on an iPaaS platform development project, working with Terraform-managed infrastructure.
- Implemented AWS RDS backup flow per MERCK requirements: regular snapshots replicated to S3.
- Migrated single-instance RDS to Multi-AZ cluster with live production data transfer for federated teams.
- Built Grafana-based alerting system from scratch: developed Flask webhook for MERCK Mail API, secured with SSL; refactored cert-manager in Kubernetes; configured alert rules for EKS nodes, MuleSoft quotas, Nginx, and logging.
- Automated MuleSoft RTF creation using Python and MuleSoft API (reverse-engineered from Any-point UI dev tools) since the Terraform provider lacked RTF agent support.
- Assisted federated teams in transitioning to new IAM roles strategy for their AWS accounts.

Novartis DevOps Support – OAuth & PAM Engineering

Nov 2021 – Jun 2023

Client: Novartis / EPAM Systems Roles: DevOps Engineer

Stack: AWS (ALB, API Gateway), Azure AD, OAuth 2.0, PKCE, Terraform, Python, Groovy, Jenkins, Bash, Chef, OpenResty, Lua

- Designed and maintained reusable Terraform modules for scalable OAuth2-based authorization on AWS (API Gateway, ALB) supporting multiple teams.
- Developed and tested authorization strategies for AWS ALB and API Gateway with dedicated Terraform modules per strategy.
- Built example Python web service demonstrating token issuance with OAuth flows (Authorization Code, On-Behalf-Of).
- Created Python Lambda for auth token parsing and claims injection via headers (legacy app support); built equivalent OpenResty (Nginx + Lua) configuration.
- Supported scientific application teams integrating PAM solutions with CI/CD toolsets.
- Wrote Chef recipes for reliable credential injection; created Jenkins pipelines with Conjur plugin.
- Developed Bash scripts supporting various PAM credential injection flows.

CTO – ITS

Jan 2020 – Present

Engineering leadership across multiple products, clients, and internal infrastructure. Grew the team from 5 to 30 people. Managing company-wide engineering methodology, leading presales activities, and ensuring successful project delivery.

ITS Engineering Strategy

Sep 2023 – Present

Client: ITS Roles: CTO

Stack: Project Management

- Leading company-wide engineering strategy, technical direction, and project management oversight.

Helpdesk Bot – Support Automation

Nov 2023 – Feb 2025

Client: ITS Roles: Project Manager, Business Analyst, Team Lead, DevOps

Stack: Python, aiogram, FastAPI, Docker, PostgreSQL, sqladmin, Todoist API

- Telegram bot integrated with Todoist for centralized technical support request handling during hackathon events.

- Supported 10 Digital Breakthrough hackathons including one national and one international event.
- Scaled support team from 1 to 3 agents with pull-based ticket distribution model.
- Two-way communication: users comment in Telegram, agents reply via Todoist ticket comments.
- Fully asynchronous implementation: Telegram API, Todoist API, and database interactions.
- Initiated the project: designed architecture, assembled team, launched to production, set up CI/CD.

Microcirculation – Eye Vessel Detection

Sep 2021 – Nov 2023

Client: Far East Innovations Roles: CV Engineer, Project Manager, Team Lead

Stack: Python, PyTorch, OpenCV, FastAPI, Vue, U-Net, QuPath

- Developed computer vision algorithms for detection and classification of blood vessels in slit-lamp eye images.
- Fine-tuned U-Net model achieving 0.678 Dice/F1 segmentation quality on custom medical dataset.
- Built post-processing algorithms using computational geometry: vessel decomposition, skeletonization, length/width measurement, and classification based on ophthalmologist-derived metrics.
- Used 3D-printed eye models per microscope for calibration transformation matrices.
- Deployed as full web service (FastAPI + Vue) with public demo at eye.its.xyz.
- Supervised 3 bachelor/master thesis projects on segmentation and synthetic data generation.
- Registered database certificate; conducted U-Net meetup presentation.

ML Showroom

Sep 2021 – Feb 2022

Client: ITS Roles: Project Manager

Stack: Python

- Managed a machine learning demonstration/showcase project.

Career Assistant – Mobile App

Jan 2021 – Apr 2021

Client: Kaspersky Lab Roles: Project Manager

Stack: Python, Flutter, Dart, Firebase, GraphQL

- Mobile application connecting career experts with junior specialists seeking consultation.
- First project management role; team included frontend and backend engineers.
- Project did not reach production but provided valuable management experience.
- Key lessons learned: avoid starting with too many unfamiliar technologies; apply KISS principle.

Corporate Knowledge Base

Oct 2020 – Present

Client: ITS Roles: Project Manager, Business Analyst, DevOps

Stack: Wiki.js, Docker Compose, PostgreSQL, Elasticsearch, Keycloak, SSO, Git

- Launched internal corporate wiki to preserve and transfer knowledge; 31 unique contributors, 9 with 50+ commits.
- Deployed Wiki.js via Docker Compose with PostgreSQL; later removed Elasticsearch for resource efficiency.
- Implemented SSO via corporate Keycloak for seamless employee access.
- Git-synchronized content for backup, authorship tracking, and version history.
- Organized knowledge management meetups to drive adoption; wiki became a core part of company culture.

XTHON – Hackathon Platform

Jun 2020 – Present

Client: ITS Roles: Frontend Engineer, Backend Engineer, Project Manager, Team Lead, Tech Lead, DevOps

Stack: Python, Flask, SQLAlchemy, JavaScript, React, Next.js, OpenResty, Nginx, Material UI, Docker

- Digital platform for running online hackathons in a gamified format; hosted 100+ hackathons since 2020.
- Started as frontend developer on admin panel (Material UI), later took on backend, DevOps, and management roles.
- Created a standalone JavaScript API library imported from S3 for landing pages (originally Pug-based); migrated to Next.js for SSR.

- Implemented OpenResty scripts for meta-tag injection in SPA React app before Next.js migration.
- Evolved DevOps: separate repos with Jenkins → multi-stage Docker builds → private registries (JCR, then GitLab) → monorepo with GitHub Flow.
- Led backend refactoring: extracted business logic from controllers into services, added unit tests integrated into CI.
- Managed sprints, task planning, technical support scripts, and team coordination (2–12 members).
- Notable events: Digital Breakthrough, Lisbon Hackathon.

ITS Core Infrastructure

Jun 2020 – Present

Client: ITS Roles: DevOps Engineer, CIO

Stack: Jenkins, GitLab, Linux, Bash, Docker

- Responsible for all company infrastructure since 2020: CI/CD systems, source control, Linux servers, containerized services.

Museum Guide Mobile App

Jun 2018 – Jun 2019

Client: ITS Roles: Backend Engineer, Mobile Developer

Stack: Python, React Native

- Developed backend and mobile application for museum visit guidance.

Seal Recognition from Drone Imagery

May 2018 – May 2020

Client: ITS Roles: ML Engineer

Stack: Python, OpenCV, PyTorch

- Developed deep learning model for detecting seals in UAV aerial photographs.
- Applied data augmentation algorithms and experimented with color space transformations.
- Defended bachelor's thesis based on this work at SPbPU.

Backend Engineer – RUVENTS LTD

Jan 2021 – Oct 2021

FADM – Web Application Support

Jan 2021 – Oct 2021

Client: RUVENTS LTD Roles: Backend Engineer

Stack: Python, Django, AngularJS

- Maintained and supported a web application built on Angular frontend and Django backend.

Education

Graduate Studies in Applied Mathematics (incomplete)

Peter the Great St. Petersburg Polytechnic University, Russia

2020 – 2022

Mentor for Algorithms and Data Structures course

B.Sc. in Applied Mathematics

Peter the Great St. Petersburg Polytechnic University, Russia

2016 – 2020

Thesis: Seal recognition from drone imagery using deep learning (OpenCV, PyTorch)

Languages

Russian (native), English (B2+)

Links

- Portfolio: leins275.xyz
- LinkedIn: linkedin.com/in/leins275
- XTHON Platform: xthon.xyz
- Eye Vessel Demo: eye.its.xyz
- U-Net Meetup: youtu.be/unuBcZAFOvY
- Knowledge Management Meetup: youtu.be/sdgjbPIgvRQ