Aliaksandr (Alex/Sasha) Babaren

Software Engineer / Backend Developer

Email LinkedIn | GitHub

Summary

Dedicated Software Engineer with extensive experience in designing, developing, and optimizing high-performance backend systems across agriculture, media, healthcare, finance, recruitment, cybersecurity, and real estate. Skilled in Python ecosystems (Django/DRF, FastAPI), cloud infrastructure (AWS, DigitalOcean), asynchronous processing, distributed systems, and data pipelines. Proven ability to lead technical projects, improve system reliability, automate workflows, and streamline infrastructure using IaC practices.

Location

Warsaw, Poland.

Languages

Python – Django/DRF, FastAPI, Flask, Serverless.
TypeScript/JavaScript – React, jQuery.

Data Access

SQLite, **PostgreSQL**, **MySQL/MariaDB**, **MongoDB**, **DynamoDB**, **Redis**, **OpenSearch/Elasticsearch**.

Brokerages / Messaging

RabbitMQ, **AWS SQS**, **Redis** (pub/sub, caching).

Cloud

AWS – EC2, ECS Fargate, S3, Lambda, CloudFront, RDS, DynamoDB, SES, SQS, CloudWatch.
DigitalOcean – Droplets.

Infrastructure

Docker – production and development containerization.

Terraform – IaC for AWS and DigitalOcean environments.
GitHub Actions – CI/CD pipelines for automated testing, builds, and deployments.

Communication

English – Full professional proficiency.
Russian – Native.
Belarusian – Native.
Polish – Limited proficiency.

Interests

KLIK.music – online media project focused on Belarusian music.
Music overall: vinyl collecting, concerts, guitar, history of music.

Employment

Fermata —
Software
Engineer

AI in Agriculture
Dec 2024 – ongoing

Engineered a secure image delivery pipeline using CDN, improving latency and user experience compared to direct S3 access.

Overhauled a complex legacy client integration: emulated camera input, implemented custom serialization, ensured reliable communication.

Implemented centralized secrets management with AWS SSM Parameter Store, introducing versioned, secure credential handling.

Built a service for automated arrangement of zone objects (camera & positions) with flexible configuration options.

Contributed to image tiling features, reducing loading time by splitting images into smaller tiles.

Refactored filtering system powering core functionality for accurate and efficient querying.

Stack:
Python, asyncio, MongoDB, RabbitMQ, FastAPI, AWS

(S3, CloudFront, Parameter Store, Lambda, EventBridge), pytest, Sentry, Nomad, Portainer.

KLIK — Technical Director / Pet Project

Online music media

Feb 2024 – ongoing

Launched the public-facing website with seamless access to artist data.

Built Python scrapers for automated ingestion of Spotify and Yandex Music metadata.

Migrated data storage from Google Sheets to a Django REST API backed by PostgreSQL.

Orchestrated infrastructure migration from DigitalOcean to AWS: backend on ECS Fargate, frontend on CloudFront.

Developed AWS Lambda functions for periodic harvesting and data processing.

Created CI/CD pipelines (GitHub Actions) for backend and frontend.

Automated daily site updates to eliminate manual steps and improve reliability.

Implemented a robust data transfer mechanism from Google Sheets to PostgreSQL.

Introduced enhanced Django admin with custom features improving data management.

Applied Terraform to enable reproducible, versioned AWS resource provisioning.

Stack:
Python, Django, DRF, Django templates, PostgreSQL, Google Sheets, AWS (ECS, RDS, Lambda, SQS), BeautifulSoup4, DigitalOcean Droplets, GitHub Actions, Terraform.

Remedy Product Studio — Senior (L5) Software Engineer

Warsaw, Poland
Mar 2023 – Nov 2024

Wave Neuroscience, Inc. — Healthcare domain

US wide

Supported and optimized legacy systems while contributing to gradual modernization.

Led migration of critical datasets from Cybermed DB to Amazon RDS and Redis, improving performance and reducing cost.

Expanded SDK features enabling seamless integration with Cybermed DB.

Built a Redis-based solution for high-speed data access and caching.

Designed and maintained email workflows using AWS SES.

Contributed to frontend development using React for cohesive integration with backend services.

Stack:
Python, FastAPI/Flask, AWS (DynamoDB, SES, RDS, S3), Redis, Cybermed DB, JavaScript + React, Sentry.

Halter Ranch — POS system

CA, US

Developed a full POS system tailored for restaurant operations.

Designed and optimized the database for efficient data management.

Refactored order management logic to improve maintainability and performance.

Built an automated system for precise order calculations.

Prepared the application for its first production release.

Created unit & integration tests using pytest.

Wrote internal documentation for future maintenance.

Integrated ShipCompliant for regulatory shipment compliance.

Added subscription functionality for wine club customers.

Implemented Stripe-based payment processing.

Designed async SQLAlchemy workflows for high-performance data operations.

Integrated with WineDirect for direct-to-consumer operations.

Stack:
Python, FastAPI, Stripe, async SQLAlchemy,
PostgreSQL, pytest, AWS (RDS, SQS),
ShipCompliant, WineDirect, Auth0, Klaviyo, Sentry.

Innowise Group — Software Engineer

Minsk, Belarus / Warsaw, Poland
Jan 2021 – Mar 2023

Mentored junior developers.

Conducted interviews and candidate evaluations.

Assisted engineers with interview preparation.

Pectus Finance — Finance domain

Berlin, Germany

Designed the database architecture for a tree-structured data model.

Implemented SQL queries and data parsers for CSV, XLSX, and JSON.

Built comprehensive error-handling for high system reliability.

Developed the serverless components of the application.
Authored technical documentation and project guidelines (pre-
  commit, docstrings, type hints).

Stack:
Python, FastAPI, AWS (Lambda, SAM, API Gateway,
SQS, RDS, S3), Serverless Framework, PostgreSQL,
SQLAlchemy.

Drax Executive

— Recruitment

domain

UK

Built a generic architecture for extracting data from multiple
  sources.
Designed databases for efficient data retrieval and analysis.
Implemented OpenSearch for full-text search.
Created scripts for data manipulation in MongoDB and MySQL.
Developed serverless application components.
Built unit, integration, and E2E tests.

Stack:
Python, FastAPI, AWS (Lambda, SQS, API Gateway,
RDS, OpenSearch, S3), MySQL, MongoDB, pytest.

NDA Project —

Cybersecurity

domain

Implemented RESTful APIs and data-exchange schemas.
Designed database schemas for optimized organization.
Developed TCP/IP restriction mechanisms for enhanced security.
Implemented user-permissions management.
Created custom widgets for Django admin.
Built tests ensuring stability and reliability.

Stack:
Python, Django, DRF, MariaDB.

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iTechArt Group — Software Engineer

Minsk, Belarus
Jun 2020 – Dec 2020

Project in Real Estate domain

Implemented backend modules for a Django admin back office.
Built custom widgets for landing pages.
Set up and configured a notification system.
Created email templates compatible with different clients and
  platforms.
Migrated frontend from Django templates + jQuery to React.

Stack:
Python, Django, Celery, PostgreSQL, JavaScript,
jQuery, Bootstrap, HTML5, CSS3, Mailchimp, pytest,
Django templates, React.js. **Belarusian State**   2019–2022
University of Informatics and Radioelectronics

Computer Science and Engineering at Faculty of informational
  technologies and control (GPA: 3.73 / 4.0})