Aliaksandr (Alex/Sasha) Babaren

Software Engineer / Backend Developer living in Warsaw, Poland.

Email | LinkedIn | GitHub

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.

R&D Skills

Languages

Python – Django/DRF, FastAPI, Flask, Serverless Framework, etc. - **5+ years of experience.**
TypeScript/JavaScript – React, jQuery - **1 year of experience.**

Data Access

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

Brokerages / Messaging

RabbitMQ, **AWS SQS**, **Redis**.

Cloud

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

Music overall: vinyl collecting, concerts, guitar, history.

Employment

Fermata — Software Engineer

AI in Agriculture
Dec 2024 – ongoing

- Built a Slack app that automated a key business-critical reporting flow, integrating with the internal report service and enabling teams to generate reports on demand or on schedule.
- 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, Slack API, AWS (S3, CloudFront, Parameter Store, Lambda, EventBridge), pytest, Sentry, Nomad, Portainer.

KLIK — Swiss Army Man / 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.

Education

Belarusian State University of Informatics and Radioelectronics

2019-2022

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

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