Nikolay Vavilov

Backend Software Engineer

+996 (700) 397-132

GMT+6, Kyrgyzstan

LinkedIn GitHub vavilovnv.github.io vavilovnv@gmail.com t.me/nioklas

ABOUT

Backend Software Engineer with **15+ years in software development and 5+ years focused on Python**, specializing in asynchronous microservices, APIs, and enterprise systems. Experienced in building production backend services and developing **LLM-powered applications and RAG systems**. Combines strong hands-on engineering with deep enterprise domain knowledge and prior technical leadership experience.

SKILLS

Languages: Python, SQL, Go (basic), TypeScript (basic), 1C
Backend: Asyncio, FastAPI, Litestar, Django, Flask, REST APIs, Taskiq, ARQ, Pika, aiokafka, Celery, Exchangelib, Pytest
AI & LLM: LLM workflows, RAG, LangChain, LangGraph, llama.cpp, embeddings, vector search
Databases & Queues: PostgreSQL (pgvector), Redis, MongoDB, ClickHouse, MariaDB, ChromaDB, Kafka, RabbitMQ
Data Engineering: Apache Airflow, Snowflake
Infrastructure: Docker, Kubernetes, AWS, GCP, Nginx, HashiCorp Vault, Prometheus, Grafana, Elasticsearch, GitLab CI/CD

EXPERIENCE

Unlimited Production, Russia, Moscow, **04/2023 - Present**

Senior Backend Engineer (Python)

* Owned and evolved the backend of a microservices-based Express Email SmartApp used daily by tens of thousands of users, integrating Exchange/EWS, IMAP, SMTP, and CalDAV; improved reliability, performance, and maintainability through architectural and database-layer improvements.
* Designed and built a self-hosted RAG system using Qwen and llama.cpp, with automated knowledge ingestion from Google Docs and Confluence, a custom embeddings pipeline, vector search, and PostgreSQL/pgvector.
* Evolved the AI assistant into a stateful LLM application using LangChain and LangGraph, implementing conditional workflows, persistent state, structured outputs, and human-in-the-loop interactions.
* Developed scalable backend services and chatbots for workload management and cross-team networking; contributed new features and critical fixes to the PyBotX framework.

LanguageLink, Russia, Moscow, **04/2021 - 04/2023**

Python Backend Engineer

* Developed and maintained backend services and REST APIs for a corporate portal, including a training center management system used across 13 locations and integrations with Bitrix.
* Maintained and extended Apache Airflow data pipelines, orchestrating ETL workflows that collected and transformed data from multiple sources and loaded it into Snowflake for analytics and reporting.
* Built an employee benefits service, automating access to corporate perks and reducing manual HR operations.
* Improved backend reliability by expanding automated test coverage to 75–80% across core modules.

NSC.Media, Russia, Moscow, **04/2020 - 04/2021**

Head of ERP Development (1C ERP, Oracle e-Business Suite)

* Led an ERP development department of 50+ engineers across 4 teams, covering finance, accounting, payroll & HR, and management reporting.
* Oversaw development and evolution of business-critical 1C ERP and Oracle E-Business Suite systems, coordinating technical priorities with business stakeholders.
* Implemented automated testing and CI/CD practices, reducing release cycles and production defects.
* Remained hands-on in architecture and engineering while leading teams, contributing to technical decisions, code reviews, and complex implementations.

Softrum (4bis), Russia, Moscow, **02/2016 - 04/2020**

Enterprise Software Team Lead (1C)

* Progressed from Software Engineer to Team Lead, ultimately leading a 13-member development team and driving technical delivery, code reviews, and mentoring.
* Designed and delivered enterprise solutions across production, finance, accounting, payroll & HR, trade operations, and management reporting.
* Developed and launched a helpdesk system used by ~40 support specialists, streamlining support workflows and reducing ticket resolution time by 25%.

Earlier career: Held software engineering and technical leadership roles across several companies before 2016, primarily developing enterprise and ERP systems.

EDUCATION

ASU, BSc in Applied Mathematics (Software Engineering), Maykop, Russia, 2007

OTHER

Languages: Russian - Native, English - B2