

ALEXEI KHACHATRIAN

Senior Software Development Engineer • 10+ Years • Distributed Systems, Cloud, Team Leadership

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SUMMARY

Senior software engineer with 10+ years building distributed systems, cloud infrastructure, and SaaS platforms. Deep backend experience across multiple modern language ecosystems, with strong AWS and GCP operational background. Led engineering teams across multiple countries in financial, security, and analytics domains. Comfortable with large-scale data (petabyte-class PostgreSQL) and high-throughput production systems (currently operating a platform at ~600 RPS, scaling toward 1000 RPS). Active open-source contributor focused on security research and embedded systems. Pursuing a PhD in Computer Science (expected 2029).

EXPERIENCE

Senior Software Development Engineer

NGA — Next Generation Advanced

Dec 2023 — Present

- Building automation software for emergency-services platforms deployed internationally, primarily in the US.
- Operating one of our platforms at approximately 600 requests/second and architecting the path to 1000 RPS; backend systems where reliability and latency are non-negotiable.

Python Developer

Wildbox.ru

Mar 2023 — Dec 2023

- Built analytics features for a Wildberries-marketplace platform on a ~2 PB PostgreSQL dataset.
- Worked on query performance, ingestion, and feature development under heavy data volume.

Lead Software Development Engineer

Akvelon, Inc.

Mar 2022 — Mar 2023

- Led a developer team building an information-security SaaS B2B product.
- Ran one-week sprints, daily stand-ups with client and team, code reviews, and CI/CD pipelines.
- Architected and operated infrastructure across Azure, GCP, and AWS in parallel.

Senior Software Development Engineer

Zamigos Consulting Group

Aug 2020 — Mar 2022

- Delivered backend systems across financial, messaging, and accounting verticals.
- Worked across multiple stacks and teams; collaborated closely with DevOps, frontend, and QA.

Lead Software Development Engineer

iNexus

Oct 2017 — Mar 2020

- Built Virtual Publicist (virtualpublicist.com) from scratch as the lead engineer — a music-industry PR platform on Laravel + PostgreSQL + Redis + Elasticsearch, deployed on a dedicated Hetzner CentOS server with AWS SES / SQS, scaled to a multi-million-row contact dataset before release.
- Recruited and led a team of two frontend engineers, one backend engineer, and a QA over three years; coordinated cross-functionally with designers, content writers, and marketing.
- Operated two dedicated CentOS Linux servers hosting 50+ WordPress sites for clients and volunteers.
- Owned security: penetration testing and exploit testing across our infrastructure and client sites.

Freelance Backend Lead (side work)

Self-employed

Apr 2017 — Aug 2020

- Led a distributed backend team across Spain, Russia, Ukraine, Armenia, and Israel for an Israeli-American e-commerce project.
- Acted as lead developer setting architecture, code standards, and delivery cadence.

Web Developer

Web Foundation

Aug 2016 — Apr 2017

- Built sites and platforms across WordPress / WooCommerce, CodeIgniter, CakePHP, Magento 1.9 and 2.0, and custom PHP / JS stacks.

Web Developer

Ayrosa — Digital Marketing Agency

Jun 2016 — Aug 2016

- Built a Yii2-based personal account system for users of an online store on SimplaCMS; handled backend, frontend, server, and hosting.

RESEARCH

PhD Researcher — Bioinformatics Lab Collaboration

European University of Armenia / Bioinformatics Group (Armenia)

Mar 2025 — Present

Applied research at the intersection of computer science and bioinformatics. Building Python-based automation tools for molecular and protein analysis, including: (1) an aggregator that pulls data from major protein banks (e.g. RCSB PDB) into a unified internal dataset; (2) an AI-driven recommendation system that infers a researcher's interests from their browsing behavior across our protein catalogue and surfaces related entries; (3) a drug-design automation pipeline that takes a candidate molecule from a pharmaceutical lab and simulates its interaction against every human protein in multiple binding positions to predict whether it would help or damage the target. Heavy compute workloads run on the Aznavour supercomputer.

SELECTED PROJECTS

JobsRadar — Founder & Sole Engineer

jobs-radar.com

2024 — Present

Global remote-job aggregation platform. Built solo and operated in production. Ingests listings from multiple job-board sources into a Laravel + PostgreSQL + Redis stack with Python pipelines; cron-based sync every few hours; CloudFront + AWS infrastructure; SEO-driven indexing strategy; multi-channel distribution via Telegram and LinkedIn experiments.

Stack: Laravel, PostgreSQL, Redis, Python, AWS (CloudFront, EC2, RDS).

ReserveX — Co-Founder & Lead Engineer

B2B booking & management SaaS (discontinued)

2023 — 2024

Multi-tenant white-label SaaS for service businesses (salons, clinics, fitness, etc.) with per-company subdomains. Built a Laravel 10 + PHP 8.2 API backend with JWT auth, Stripe Cashier billing with tiered plan limits enforced via middleware, multilingual entities, fine-grained RBAC (~40 permissions), complex calendar service with smart free-slot generation and conflict checking, client CRM, and Elasticsearch-powered discovery. Infrastructure on AWS with CodeDeploy, Supervisor queues, Sentry, and Docker. The original team included a designer, frontend engineer, HR, sales, and marketing — over time team members stepped away, and the project was wound down despite the platform reaching production-ready state.

Stack: Laravel 10, PHP 8.2, JWT, Stripe Cashier, MySQL, MongoDB, Redis, Elasticsearch, AWS (S3, DynamoDB, CodeDeploy), Sentry, Docker, Nginx, React (separate frontend).

Activeo — Founder & Sole Engineer

Gym management SaaS (discontinued)

2024 — 2025

Multi-tenant SaaS for gym operators with Company → Branch → Coach/Package hierarchy. Built and operated the full stack: Laravel backend, React dashboard, Stripe billing with subscription enforcement, Keycloak SSO/JWT auth, SSR

public gym sites, multilingual content (EN/RU/HY) with fallback logic, tenant isolation, and AWS deployment. Discontinued for commercial reasons.

Stack: Laravel, React, Stripe, Keycloak, PostgreSQL, AWS, SSR.

SKILLS

Languages: Multiple modern backend stacks (PHP, Python, JavaScript / Node.js), C / C++, Bash, SQL

Backend: REST / JSON APIs, microservices, multi-tenant SaaS, payment integrations (Stripe), SSO / OAuth / JWT (Keycloak), Socket.IO, Selenium

Data: PostgreSQL (incl. PB-scale), MySQL, MongoDB, DynamoDB, Redis, Elasticsearch + Kibana

Cloud: AWS (EC2, RDS, S3, CloudFront, Route 53, Cognito, Elastic Beanstalk, CodePipeline / Deploy / Build, CloudWatch, SES, SNS, SQS, IAM), GCP

Scale: High-throughput production systems (~600 RPS, designed toward 1000 RPS), petabyte-scale databases, multi-million-row datasets

Operations: Docker, Nginx, Supervisor, Ubuntu Server, CentOS, Kali Linux, CI/CD, GitLab / GitHub, Atlassian, penetration testing

Embedded / IoT: ESP32, ESP-IDF, ESP-NOW, ESP-MESH, LoRa / LoRaWAN (secondary)

Leadership: Distributed team leadership, estimation, risk planning, hiring, technical design

EDUCATION

PhD in Computer Science (in progress)

European University of Armenia

2024 — 2029

Research focus: software automation. Applied work at the intersection of computer science and bioinformatics — automation tools for molecular and protein analysis, including protein-bank data aggregation, AI-driven research recommendation, and drug-interaction simulation on the Aznavour supercomputer.

MSc in Computer Science

European University of Armenia

2021 — 2023

BSc in Computer Science

European University of Armenia

2011 — 2017

CERTIFICATIONS & OPEN SOURCE

- **Laravel Certified Developer** — Laravel.com (2021)
- **TestDome PHP — Gold** (Top 10% Worldwide, 2018)
- Active open-source contributor since 2017 across multiple GitHub organizations (ElectroHub, data-transmission-laser-protocol, kryptOra), with current focus on cybersecurity research tooling and embedded protocol design.

LANGUAGES

English (professional), Russian (native), Armenian (native).