Dmitri Melnikov

Principal Engineer · AI Agents & Platforms · Product Engineering · Full-Stack

London, UK · UK Indefinite Leave to Remain, no sponsorship needed · t.me/melnikovdv · melnikov.tech · linkedin.com/in/melnikovdv · github.com/melnikovdv

SUMMARY

Principal engineer with 18+ years across backend, web and mobile at JetBrains, VK and Yandex, and as a solo startup founder. Currently owns JetBrains' company-wide AI agent platform end to end, from product vision and UX to the agentic harness, enterprise connectors and RAG. Pairs hands-on engineering with product and team leadership: former Head of Frontend for up to 20 engineers, Associate Professor in Computer Science and speaker with 20+ talks.

EXPERIENCE

JetBrains — Principal Software Engineer

London, UK · Nov 2025 – Present

A Claude Code–style cloud agent platform built for the enterprise and available to all JetBrains employees (3K): its own agentic harness, built-in enterprise connectors and RAG, and custom agents that work proactively in the background and post results to a feed

- Own the platform end to end, from product vision, UX and design to architecture and hands-on backend and frontend development
- Took the platform from an early prototype to a production service for the whole company: reworked the backend architecture, CI/CD and observability, and rebuilt the frontend as a new app on a new architecture
- Designed and built the agentic harness: persistent, restart-safe agents and sub-agents, custom agents, multi-agent workflows and human-in-the-loop (HITL) control of sensitive actions
- Delivered enterprise connectors with per-user authorisation, MCP support and per-tool permissions, plus RAG with hybrid semantic and keyword search over LLM-enriched company knowledge

Tech: Python, FastAPI, asyncio, PostgreSQL, LanceDB, OpenAI and Anthropic APIs, MCP, OAuth, TypeScript, React, MobX, Tailwind, Vite, Docker, Kubernetes, GitHub Actions, Sentry, PostHog, Playwright

Scalable Solutions — Head of Frontend

London, UK · Sep 2024 – Oct 2025

Technology provider for digital-asset businesses: crypto core, custody, a trading platform, custodial and non-custodial wallets and a payment gateway

- Led the frontend department of up to 20 engineers across 5 products: hiring and restructuring the team, assessing engineers after the acquisition of a smaller company, and starting internal frontend meetups with talks
- Built new products from scratch: a company website with tools for the sales team and an implementation of the Travel Rule protocol for compliant crypto transfers
- Designed an LLM-based localisation system used across the company
- Modernised the frontend stack: led the migration from PHP, initiated the split of React apps into separate core logic and UI packages with MobX, merged two products into one monorepo and introduced Astro for landing pages instead of Next.js

Tech: TypeScript, React, MobX, Astro, Next.js, Vite, Tailwind, Android, iOS, Kubernetes, LLM APIs

Product Science — Principal Software Engineer

London, UK (remote, Los Angeles-based company) · Oct 2021 – Jun 2024

SaaS that helps mobile teams find and fix app performance issues, founded by the Liberman brothers (ex-Snapchat)

- Led a department of 10 engineers and owned system architecture, infrastructure and key product features
- Built a high-performance flame chart in TypeScript and Canvas that renders traces with hundreds of thousands of events, plus the trace parser and synchronised trace and video playback
- Scaled the trace processing pipeline on GCP serverless (Cloud Run, Pub/Sub)
- Built a device farm of a dozen real devices for automated performance regression analysis
- Maintained the bytecode instrumentation engine that injects tracing into customer apps
- Built a Markdown-based engine and viewer for product docs and manuals

Tech: Kotlin, Micronaut, Javalin, PostgreSQL, GCP, Cloud Run, Pub/Sub, Terraform, Docker, Gradle, TypeScript, React, MobX, Tailwind, Android, iOS, bytecode instrumentation

EventSheep — Founder & Engineer

Saint Petersburg, Russia · Feb 2020 – Oct 2021

Bootstrapped SaaS for event organisers: branded event websites, schedules, attendee registration and email campaigns

- Founded and ran the product alone, from idea and customer discovery to pricing, sales and support
- Built the full product: Kotlin backend, Vue/Nuxt web app and event websites, native Android and iOS apps
- Won paying customers in three countries, including festivals in Norway and Austria, the MXDC dance festival (500+ attendees) and the MBLT tech conference (400+ attendees) in Moscow

Tech: Kotlin, Vue, Nuxt, Bootstrap, SQLite, Docker, DigitalOcean, AWS, Android, iOS

VK (Mail.Ru Group) — Staff Software Engineer
Saint Petersburg, Russia · Apr 2015 – Feb 2020

One of the largest Russian tech companies: social networks, messengers, email and internet portals

- Built the TamTam messenger from its very beginning to public launch and growth to hundreds of thousands of monthly users; its technology was later reused in a new VK product
- Led the Android team of 5 engineers and managed the full product development cycle
- Designed a custom binary protocol over TCP/IP for real-time messaging and sync, together with the client APIs
- Designed a modular client architecture whose messaging core was reused in the Android app of OK, one of VK's main social networks

Tech: Java, Kotlin, Android, RxJava, SQLite, Gradle, one-nio, Cassandra, Redis, Kafka

Yandex
Saint Petersburg, Russia · Jul 2011 – Oct 2014

Product Manager, Public APIs · Apr 2014 – Oct 2014
Senior Software Engineer · Jul 2011 – Mar 2014

One of the largest tech companies in Europe: search, ads, maps, payments and other internet services

- Developed Java backend services for the payment gateways of Yandex.Money, an online payment service used by thousands of merchants
- Switched to Android as mobile took off, and led the move of app development from an outsourcing vendor to an in-house team of 10 engineers: hired the team and developed the apps hands-on
- As product manager, owned Yandex.Money's public APIs used by hundreds of partners: set the API strategy and delivered developer documentation, code samples and SDKs for multiple platforms

Tech: Java, Java EE, Spring, Hibernate, Maven, Oracle, Android

Sigma Soft — Software Engineer
Saint Petersburg, Russia · Dec 2007 – Jun 2011

Customs clearance software company

- Built an XML format migration library and the "Odysseus" customs clearance CRM from scratch

Tech: Delphi, Firebird, XML, XSD

SKILLS

- **AI and agents:** agentic harnesses, multi-agent systems, RAG, hybrid search, MCP, human-in-the-loop (HITL), guardrails, prompt caching, model routing, LLM observability and tracing, cost and latency optimisation, OpenAI and Anthropic APIs, AI-assisted development with coding agents (Claude Code, Codex)
- **Product:** product discovery, UX and product design, API products, developer experience
- **Backend:** Python, FastAPI, Kotlin, Java, Spring, Javalin, Micronaut, REST, gRPC, API design, PostgreSQL, Cassandra, Redis, Kafka, LanceDB
- **Frontend:** TypeScript, React, MobX, Zustand, Astro, Next.js, Vue, Nuxt, Tailwind, Vite, Canvas
- **Mobile:** Android, Kotlin, Java, Coroutines, RxJava, Dagger, Room, SQLDelight, Kotlin Multiplatform
- **Infrastructure:** GCP, AWS, Kubernetes, Docker, Terraform, GitHub Actions, CI/CD, Sentry, PostHog
- **Leadership:** leading departments of up to 20 engineers, hiring, architecture, mentoring, tech talks and teaching

SPEAKING AND TEACHING

- 20+ talks at tech conferences and meetups including MBLT DEV, JUG Ru Group, Podlodka Android Crew, Innopolis, e-Legion and Yandex events, on Android, data storage, reactive programming, battery optimisation and building startups; recordings and slides at melnikov.tech/talks
- Taught hundreds of students computer science, software development and programming languages at two universities
- Associate Professor in Computer Science, Admiral Makarov State University of Maritime and Inland Shipping, 2017 – 2021; member of the diploma committee at the department of applied mathematics, 2019 – 2021
- Lecturer in Computer Science at Technopolis, VK's educational programme at Peter the Great St Petersburg Polytechnic University, 2019 – 2022

EDUCATION

Specialist degree (5-year, equivalent to a Master's) in Applied Mathematics and Computer Science, with honours
Admiral Makarov State University of Maritime and Inland Shipping, Saint Petersburg, Russia · 2002 – 2007
GPA 4.93/5

LANGUAGES

English (fluent), Russian (native)